Rec. Frankf. Febr 2d

Poppelsdorfer Schloss
Bonn
21/1/57

Hochgeachteter Herr Doktor!

Besten Dank für die gütigen Mittheilungen über Elodea canadensis u. Nelumbium luteum. Die Angaben, die Sie mir gefälligst über Elodea machen, stimmen dem größten Theil nach ganz mit denen, die Sie schon früher an Braun gemacht haben, überein, doch Sie mir noch einige Punkte mehr angeben. Daß der Pollen geschlossen ist, ist höchst auffallend. Ähnliche Pollen kennt bei keiner verwandten Pflanze nach meinem Wissen vor: Hydrilla verticillata (die in Ostindien), Lagarosiphon muscoides (am Cap d. g. H.) Elodea guianensis (in Südamerika) Elodea densa (Egeria densa Planch. auch in Südamerika) haben ein kugelig gestaltete Pollenkörner mit höchst feinen Spitzchen u. Wärzchen überall. Ich kann mir nur denken, daß die Elodea canadensis an

scheinbar gliederweise Stellenweise in sehr junge
Blüthen zeigt, indem die Stellungs Regeln
auch nicht ganz verstanden sind.

Wollten Sie sich der Mühe mal [illegible]
unterziehen, so würden Sie bei Braun meine
Abhandlung sehen, wo die Pflanzen, die ich
sie sehr untersuchen können, beschrieben
sind.

Fragen in Bezug auf die Stellen
[illegible] ganz [illegible] gerne von Ihrer
jetzigen Beschreibung auch an Ihrem
Werke [illegible] zu [illegible] Gebrauch
machen [illegible] hätte schon viel früher schon
vor Jahren auch an Sie selbst gewendet
wenn ich nicht gefürchtet hätte Ihnen
lästig zu werden.

Sie werden nun bald Braun sehen.
Wie sehr bedauern ich nun nicht auch
in Berlin zu sein und Ihnen ge-
sprochen zu haben zu können.

Nochmals danke ich Ihnen bestens

Ihr ganz ergebenster
R. Caspary.

Noch Eins! Ich empfehle Ihnen
sehr den Lithographen Renbke
in Berlin, Leipziger Platz
No X. [illegible] kennt sich

dort. Er ist sehr geschickt u. sehr [illegible]-
fertig; Grüßen Sie ihn bestens von
mir. Er wußte sehr genau und kann Ihnen
über etwaige Wünsche jede nöthige
Auskunft zu ertheilen. Er ist mit
besser als Henry u. Cohn. Braun
hat freilich auch einmal bei ihm
nun nicht ganz angenehme Erfah-
rung gemacht

MISSOURI BOTANICAL GARDEN
copyright reserved
cm 0 1 2 3 4 5 6 7 8 9 10

R Caspary

Herrn Dr. Engelmann

MISSOURI BOTANICAL GARDEN
GEORGE ENGELMANN PAPERS

Rec. Frankfurt
Feb. 2

Poppeldorfer Castle, Bonn
January 21, 1857

Most Honored Sir Doctor !

Many thanks for the kind communication about Elodea canadensis and Nelumbium luteum. The reports, which you give me now about E lodea, agree to a major part with those you made earlier in Bonn, only, that you mention a few more points. That the pollen is is most surprising. pollen does not appear in related plants according to my knowledge: Hydrilla verticillata (the one in East Indies); Lagorsiphon musicides (Cape of Good Hope), Elodea guianensis (in South America), Elodea densa (Egaria densa Olreich (also in South America), all have ball-shaped, one-celled, flat grain kernel with extremely fine pointlets or spinelets all over. I can only think, that Elodea canadensis seems to show pollen grains on very young flowers, who'se pollen development has not been fully progressed.

If you think it worth your efforts, you will find at Braun my manuscript of the plants, which describes the plants, which I was able to examine.

There are enough questions concerning Elodea, and I shall make use of your kind offer to turn for this to your cousin, and would have much earlier, years ago, turned to you, if I had not feared to be a bother to you.

You will see Braun soon. How much I regret not to be also in Berlin to talk and to listen to you.

Again my best thanks, Your most devoted R. Caspary

Still more ! I recommend to you much the lithographer Renbke in Berlin, Leipziger Platz Nov. X. Everybody knows him there; he is very skilled and eager to serve. Greet him best from me. He will be much inclined to report to you much useful about Berlin. He is much better than Kenny and Cohen. Braun, however, had once a not too pleasant experience with him.

(translated from German Script by Edgar Denison, August 1988)

0 1 2 3 4 5 6 7 8 9 10
cm
copyright reserved
Missouri Botanical Garden

Rec^d May 29th

Bonn

27/5/57

Lieber Herr Doctor!

Bei wem soll ich mir ein Mikroskop kaufen? — Bei dem, der die besten macht. — Welches ist das beste Mikroskop? — Dasjenige, welches im Vergleich mit den übrigen, mehr leistet, als die andern. — Die Antwort wird Niemand bestreiten; fragt man: welche Instrumente leisten im Vergleich mit den andern am meisten, so kann nur der die Antwort geben, welcher die Mikroskope ~~...~~ der bedeutendsten Optiker geprüft hat. Pringsheim zieht Schiek allen andern vor. Ich kann aber den Ausdruck darauf legen, daß Pringsheim selbst sagt: er habe ~~gleichzeitig~~ mit einem Nachet nicht genau beobachtet, ~~...~~ d. h. er kenne die Mikroskope von Nachet nicht. Nachet u. Schiek halten gar keinen Vergleich mit einander aus, selbst Bénèche ist weit weiter als Schiek. Pringsheim ist gewissenhaft, aber hat nie verglichen. Kein Schiek, die ich gesehen habe u. hier in Bonn sind allein 3 verglichen, zeigt die Streifen auf der Navicula angulata; ein Bénèche zeigt sie, obgleich nicht sehr gut, deutlich schärfer als ein Schiek u. ein Nachet zeigt sie, wie die englischen Instrumente von Ross, Smith & Beck, Powell & Lealand sehr gut; ein Nachet selbst schon bei einer 280 mal Vergrößerung u. gewöhnlich schlechtem Licht, selbst ohne schiefe Beleuchtung; ein Bénèche braucht schiefe Beleuchtung. Das große Bild, der weite Focalabstand, das reichliche Licht sind bei Schiek sehr angenehm; was kann das Angenehme aber helfen, wenn ich nicht dabei sehe, was andere Instrumente zeigen? Überhaupt ist Nachet nicht einseitig; er macht 2 verschiedene Objective; solche die ein kleines Feld, kleinen Focalabstand u. weniger Licht, dabei aber große Klarheit des Bildes haben (die Oberhäuser'sche Art) u. er macht (nach englischer u. Schieks Art) Objective mit sehr großem Feld, viel Licht, großen Focalabstand, die aber nach meinem Dafürhalten nie ein so scharfes Bild geben, als die

die ersten Art. ~~Ich ...~~ Wenn gebraucht (?) hat
verschiedenen Zwecke bis (?) ~~Sie~~ Objektiv mit
Deutlichkeit u. ein guten Objektiv [illegible] sollte Sie etwas
beste machen, wie Nachet thut. Ich werde bald
ein Instrument von ihm bekommen, das bereits (?) hat;
man sieht mit beiden die Streifen auf der
Navicula. Ich glaube, daß in Berlin Dr. Wagner
am besten Mikroskope kennt, denn er hat viel gesehen, ist
aber natürlich zu einseitig für Oberhäuser geworden,
der übrigens Nachet gleich steht. Wo Sie aber
auch ein Instrument sich bestellen, berücksichtigen
Sie folgende wesentliche Punkte: 1) der
Tisch muß drehbar sein; 2) der Spiegel muß so
eingerichtet sein, daß er allseitige Bewegung hat
u. schiefe Beleuchtung gegeben werden kann.
Ihr Mikroskop, welches die beiden Erfordernisse
nicht hat, ist nicht zu gebrauchen. Schiek macht
in neuerer Zeit Gutes, wie ich höre, ich habe jedoch
auch kein Instrument der Art von ihm gesehen. Brunno (?)
Kellner's Instrument, an das er sich nun einmal ge-
wöhnt hat, hat leider nicht sein Bild, ich muß ~~ein~~
statt ~~matter~~ u. undeutlicher im Ansicht erschienen, als
das ~~... ... ...~~ mein Oberhäuser. Ich habe seit Jahren
(seit 1849) darnach gestrebt so viel Mikroskope zu
sehen u. zu prüfen, als möglich. Die englischen halte ich
für die besten, ~~...~~ aber sie sind unbequemer u. haben
meist unnützen Apparat, die französischen folgen dann
u. ~~...~~ stehen den englischen eigentlich nicht nach;
ihr Preis ist verhältnismäßig (?) [illegible]; die deutschen sind wenig
selbstständig u. meist nur Nachahmer der französischen.
Amici's Instrumente sind trotz der meisten Arbeiten, die
die Kunst in Wagner (?) [illegible], nicht brauchbar.
denn man kann ± Vergrößerungen (?) bei ihnen nicht anwenden;
Joh. Müller wie Nr. 1 als Annahmen u. [illegible] haben, aber
nicht als Kenner von Mikroskopen; nach wenigen (?) Ehrenberg.
Mit besten Grüßen an Ihre Frau Gemahlin u. Herz (?)

Ihr ganz ergebenster
R. Caspary

MISSOURI BOTANICAL GARDEN
GEORGE ENGELMANN PAPERS

Rec. May 29 Bonn May 27, 1857

Dear Doctor !

From whom shall I purchase a microscope ? From him, who makes the best. What is the best microscope ? That, which in comparison with the others works better than the others. Nobody will contest the an - swer; if one asks: Who'se instrument produces more than the others, ? Only he can give the answer, who has seen the microscopes of the most prominent opticians. Pringsheim prefers Schick to all others. Thus I can put emphasis on what Pringsheim himself says, that he has no practical experience with a Nachet - i.e. he does not know the microscope of Nachet. - Nachet and Schick do not stand comparison with each other, even Benicke is much further than Schick. Pringsheim and never properly did a test. No Schick, as far as I have seen, and here in Bonn alone are 3, shows the stripes on Navioula angulata; A Benicke shows them, but not very well, a little higher than in Schick and Nachet like the english instruments of Ross, Smith and Beck, Powell & Lenbach, very well; with Nachet even already at about 380 times magnification and rather poor light, even without cross-lighting; a Benicke must have cross-lighting. The large field, the wide focal distance, the abundant light are very agreable with the Schick; what good is it to be agreable, if I cannot see with it, what other instruments show ? By the way, Nachet is not one-sided: he makes two kinds of objectives; such with a small field, small focal distance and less light, but with this great shaprness of the image (the Ober häufer type) and he makes (after english and Schick type) objectives with a very large field, much light, which however according to my opinion, give never as sharp an image as those of the first kind. One needs for different purposes both objectives with advantage, and a good optician should soon fabricate them, as did Nachet. I shall get soon an instrument from him, which has both; one sees with both the stripes on the Navioula. I believe, that

0 1 2 3 4 5 6 7 8 9 10 cm
copyright reserved
Missouri Botanical Garden

Dr. Wagner in Berlin knows Wickershayn best, because he saw a lot, is however perhaps too onesided influenced for Oberhäuser, who, by the way considers Nachet equivalent to it. Wherever you order an Instrument, condiser first the following three points: 1) the table must be turnable. 2) The mirror must be so installed, that it has all-sided movement, and that cross-lighting can be achieved. A Wickershay, which does not have these two - specially no.2 - can not be used. Schick manufactures both recently, as I hear, but I have not yet seen an instrument of this kind from him. The instrument of Pringsheim, on which he got used to once, does not have either. It's image is always faint and non-distinct in circumference as that of my predecessor. For years, since 1849, I made an effort, to see and prove as many microscopes as possible. I consider the english ones as the best, but they are sky-high (the German word is "unpayable" in verbatim transl. E.D.) and have many useless gadgets (The German word is Aparat = machinery, E.D.). The French follow then, and are really not inferior to the English; Their price is obtainable; the Germans are little independend and mostly imitations of the French. America's instruments are for most workers, who must bring the lense into water, not useable, because reagents can not be used with them.

Joh. Muller may be known as No. 1 as anatomist and physicist, but not as expert of Wikerhagen; less so Ehrenberg.

With best greetings to your wife and Georg your most devoted

R. Caspary

(translated from German script by Edgar Denison, August 1988)

0 1 2 3 4 5 6 7 8 9 10
cm
copyright reserved
MISSOURI BOTANICAL GARDEN

Rec. Paris 3 Aug

Poppelsdorfer Schloss
Bonn am Rh.
29/7/57

Mein lieber Herr Doctor!

Besten Dank für Ihren werthen Brief. Jetzt erst schließt der [illegible], ich habe 16 Stunden die Woche u. war so in der Klemme in Bezug auf Präparation, daß auf Ihren Brief vom 24./7., den ich erst den 28/7 bekam, erst durch Ihren werthen Schwager erst heute beantworten kann. Sie sagen, daß Sie noch 8–10 Tage in Paris bleiben; hoffentlich noch länger nach der [illegible] in Berlin zu erhalten, denn sonst trifft Sie mein Brief nicht mehr.

Die Mikrophotographie von Nachet habe ich noch nicht erhalten; die Besteller derselben warten auch beide u. ich suche auch diese zu bekommen. Wenn Sie früher kommen könnten um sich noch mit dem Mikroskop zu beschäftigen, so wäre das vortrefflich u. würde mir ein großes Vergnügen machen Ihnen behülflich zu sein. [illegible] Wenn, wie Sie sagen, Ihre [illegible] sind, dürfte wohl auch in wenig Zeit beträchtliche Fortschritte in Handhabung des Mikroskops u. Beurtheilung mikroskopischer Gegenstände machen.

[illegible]

geben Sie ja den Plan nicht auf! An Helmholtz haben Sie für Ihre Physiologie einen der ausgezeichnetsten Lehrer ich besonders der Augenspiegel u. Untersuchung freilich hauptsächlich mit der physikalischen Seite der Physiologie; das Mikroskop braucht er freilich nicht sehr viel. Einen neuen Objectträger, der das Mikroskop zur Ansicht [illegible] weiß ich freilich nicht, u. ich glaube nicht daß einer da ist. Ich weiß nicht einmal was Objectträger heißt.

Die mikroskopischen Deckgläschen finden Sie in London bei:

C. M. Topping
4. New Winchester Street
Pentonville Hill
London.

Ich begreife Sie sollten den; die einzige Sache, den der Mann hat, ist der, daß er nur mit der Rechnung schickt und ich statt [illegible] haben Sie zu bezahlen. Er macht ganz gute Präparate. Vielleicht aber macht andere Firma in London noch besser. Mr. Kippist, Librarian of the Linnean Society, wird darüber Auskunft ertheilen können.

Wenn Sie in England sind, versuchen

ich Ihnen auch Listen 2–3, zur [illegible]
welche mitzunehmen, wünsche von Zimmer-
[illegible] [illegible] mancher [illegible] bisher gemacht.
Topping hat Sie auch. In Berlin habe
ich jedoch endlich einen Zeichner gefunden,
der Sie auch gut macht u. billiger Topping
zurück. 10 Sh pro Tafel. Der in Berlin
nur 3 Sh. — ~~[illegible]~~ Also 20 Sgr. Ich kann Sie Ihnen von Berlin aus besorgen.

Ihren Characeen habe ich sehr gerne
u. mich dabei sehr gefreut. Schändlich
daß ich noch immer [illegible] bin u.
[illegible] für [illegible] keine Arbeiten
bin ich jetzt von der [illegible] ganz
[illegible] [illegible] geschlagen. Ich
werde einen Versuch machen Ihre Chara-
ceen [illegible] [illegible] zu [illegible] [illegible]
[illegible] [illegible] zu [illegible] Ihnen einen
Besuch zu machen.

Ich bitte Sie sehr mir von Dr. Hoo-
ker [illegible] [illegible] [illegible] [illegible]
mit zu [illegible]. Berkeley hat mehrere
von mir, ich [illegible] [illegible] [illegible], daß er Sie
an Hooker schickt. Ich bitte aber das [illegible]
[illegible] [illegible] auf die [illegible] [illegible] zu stellen!!

Beste Grüße an Ihre Frau Gemahlin
u. Georg. Geben Sie die Mittheilungen
nicht auf!

Mit besten Grüßen
mit herzlicher Anhänglichkeit
Ihr R. Caspary

Verte!

MISSOURI BOTANICAL GARDEN
GEORGE ENGELMANN PAPERS

0 1 2 3 4 5 6 7 8 9 10 cm
copyright reserved
MISSOURI BOTANICAL GARDEN

Rec. Paris Aug. 3

Poppelsdorfer Castle
Bonn on the Rhein
July 30, 1857

My dear Doctor !

Best thanks for your esteemed letter ! Now is the end of the collegia, I teach 16 hours per week, and thus was in a bind concerning preparations, that I can answer your letter of July 24 , which I did not get until July 28, probably through your esteemed sisters only today. You say, that you will remain in Paris still 8 - 10 days; hopefully longer to judge from the precedent in Berlin, for otherwise this letter will not find you there any more.

I have not yet received the microscopes from Nachet; instead, the purchasers push me both, and I long to get them. If you come here, you could occupy yourself with several microscopes, this would be wonderful, and it would be a great pleasure for me, to be able to assist you. A man as industrious as you, who'se know - ledge is always so all encompassing, could take time out for the significant progress in the manipulation of the microscope and the judgement of microscopic paraphernalia. Do not give up this plan ! In Helmholtz you have here in Physiology one of the most oustan - ding persons. He is the inventor of the eye-mirror and occupies himself primarly with the physical side of physiology, and , of course, he does not need the microscope much. I know nothing of a pathologist, who handles a microscope well, here, I do not believe, that there is one. I do not know really, what pathology means. !

The microscopical cover-glasses you find in London at: C.M. Topping 4 New Winchester street, Pentonville Hill, London. I al- ways get them from them. The only fault of the man is, that he ne- ver sends a bill, and I have trouble paying for them. He makes quite good preparations. But, may-be. somebody else in London makes better ones. Mr. Kippish. librarian of the Linneen Society will be able to give you information. When in London, I recomend

0 1 2 3 4 5 6 7 8 9 10 cm
copyright reserved
Missouri Botanical Garden

,to take along cases 2 and 3, for preparations, simply made of pine wood, and not made better anywhere. Topping has them also. In Berlin I finally found a cabinetmaker, who makes them well and cheaper. Topping gets 10 sh, those from Berlin are 5 sh = 1 Thl 20 Groschen. I can get them also from Berlin.

I saw your sisters here, and enjoyed them very much. Disgusting, that I am still a bachelor, and can do nothing for them. By the way, I have been proposed by the faculty as extra-ordinarius. I will make a try, to look up your sisters in the Endenick (~~??? E.D.~~), to at least have the honor of a visit.

I ask you, to bring me from Dr. Hooker a small case with . Berkeley has several of mine and i shall write him to send them to Hooker. I ask though, to stand the little case always on the high edge ! !.

Best greetings to your wife and Georg Don't give up the Mistershagen ! With best greeting and heartiest

Your R. Caspary

I almost forgot a very important request ! You certainly will see Decaisen before you leave; please ask him without too much pressure about the publication of my dissertation about fossil Nymphaeaceae, and ask him to:

1) to mail by post the originals of the drawings, when possible and as soon as possible. 2) that he send me several copies of my essay, and that through publisher's or you. I have until now seen nothing of my printed essay. Trevira tells me, that it has been published.

(translated from German script by Edgar Dehison, August 1988)

0 1 2 3 4 5 6 7 8 9 10 cm
copyright reserved
Missouri Botanical Garden

Rec.d Aug [illegible] Kew
Ans. Düren 27 Aug

Poppelsdorfer Schloss
Bonn
13/8/1857

My dear friend.

As you are in England and as I have just written an English letter to Sir W. Hooker, my mind has turned so English, that I write in this language to you.

I am most obliged to you for the 9 copies of my fossill Nymphaeaceae, which you had the kindness to send me. But why did you not take also one for yourself?

I wrote to Sir William to ask him for the favour, that I might figure in my work on Nymphaeaceae an excellent native Rhizoma of Nymphaea gigantea, which is in the Kew Museum. I asked him to send me either the rhizoma itself or a drawing of it, made by Mr. Fitch and I hope you will be so kind as to bring either the rhizoma or the drawing over for me. In case

Sir William gets me a drawing be so kind as to pay it for me to Mr. Fitch. I want to have the drawing in its natural size, or really two:

1. one view taken from the side

2. one view of the process of insertion of the leafstalk or of the process of the insertion of the leaf, seen from above

I should like much better to get the rhizome, than a drawing, but I am afraid Sir William would not like to send me the rhizome, which I ~~will w~~ should return as soon as possible.

I called upon your sisters and I had the pleasure of finding them at home.

To day I began to sketch a rhizome of Nymphaea alba in full size for my work on Nymphaeaceae; ~~it are have~~ there does not exist any faithfull representation of it. It has always been changed with the rhizome of Nuphar luteum, which is nevertheless very different.

Believe me, my dear friend, yours very truly and affectionately
Robert Caspary.

MISSOURI BOTANICAL GARDEN
GEORGE ENGELMANN PAPERS

0 1 2 3 4 5 6 7 8 9 10
cm
copyright reserved
MISSOURI BOTANICAL GARDEN

Rec. Aug.17 (?) Kew
Ans. " 27 Duren

Poppelsdorfer Castle Aug. 13,1857

My dear Friend

As you are in England and as I have just written an English letter to Sir Hooker, my mind has turned so English, that I write in this language to you.

I am most obliged to you for the 9 corms of my ~~Turkish~~ French (? E.D) Nymphaceae which you had the kindness to send to me. But why did you not fetch also one for your order ?

I wrote to Sir William to ask him for reference, that I might figure in my work on Nymphaceae, an excellent native rhizoma of Nymphaea gigantea, which is in the Kew Museum.- I asked him to send me either the rhizoma itself or a drawing of it, made by Mr. Fitch and I hope, you will be so kind as to bring either the rhizoma or the drawing over for me.- In case Sir William gets me a drawing, be so kind as to pay for me to Mr.Fitch. I want to have the drawing in its actual size, or really two:

1. Over-view taken from the side.
2. One view of the process of insertion of the leafstalk, or of the process of the cushion of the leaf seen from above.

I would like much better to get rhizoma than a drawing, but I am afraid Sir William would not wish to send me the rhizoma, which I would return as soon as possible.

I called upon your sisters and had the pleasure of finding them home.

Today I began to sketch a rhizoma of Nymphaea alba in full size for a work on Nymphaeaceae. There does not exist any faithful representation of it; it has always been changed (should be "mistaken" E.D.) with the rhizome of Nuphar, which is nevertheless very different. Believe me, my dear friend, your very truly and affectionately

Robert Caspary

(transcribed from script in english by Edgar Denison, Jupy 1988)

0 1 2 3 4 5 6 7 8 9 10
cm
copyright reserved
MISSOURI BOTANICAL GARDEN

Rec. Frankf. 13 Nov
Ans. —— 7 Dec.

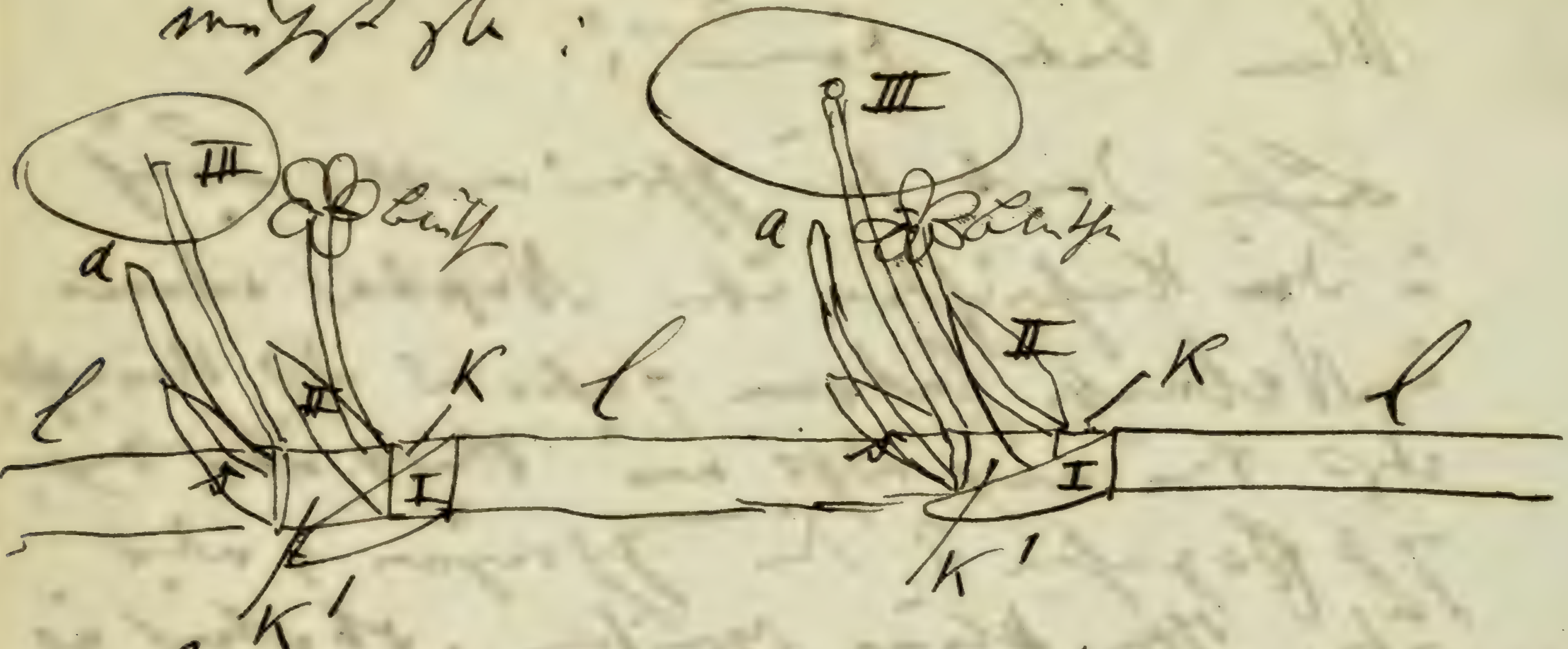
Poppelsdorf
9/11/1857

Mein lieber Freund!

Besten Dank für Ihren werthen Brief u. den Nachrichten über Nuphar advena u. Nelumb. luteum; aber es ist Unrecht, daß Sie auch nicht ein Wort über sich, Ihr Ergehen u. die Ihrigen, oder über Ihre Pläne schreiben, obgleich ich natürlich sehr gern etwas, jedes [illegible] über Sie wüßte.

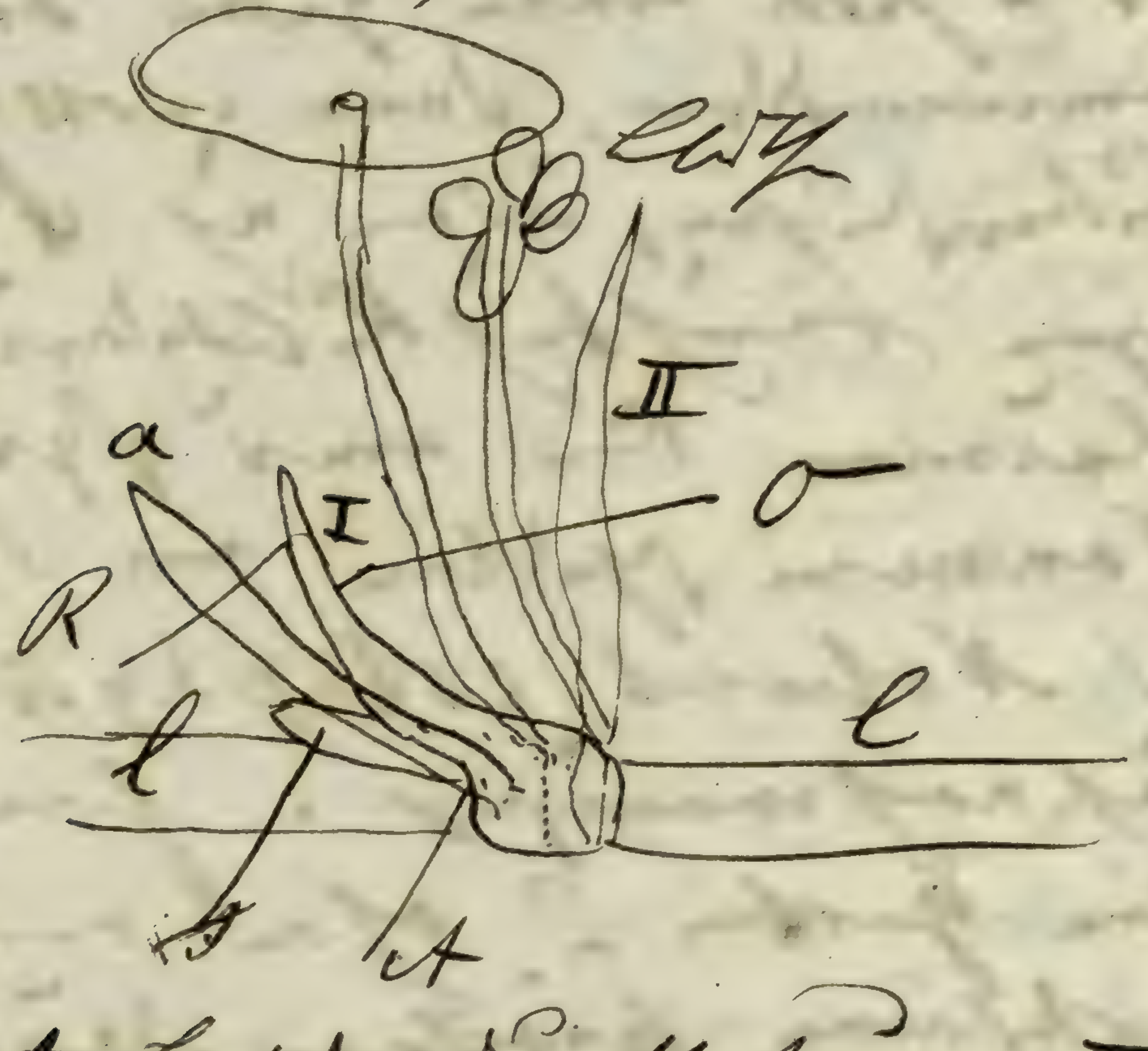
Es ist sehr freundlich von Ihnen, was ich mit Dank anerkenne, daß Sie nach America geschrieben haben, um Erkundigungen über die beiden Nymphaeaceen einzuziehen. Allerdings ist die Beschreibung des Nelumb. etwas [illegible] wie Sie zeigen. Wie die ~~Dün~~ kürzeren dicken Internodien sich von den untern 6 Zoll langen unterscheiden, ~~Die~~ diese aber selbst nach der Zeichnung 6 Zoll lang ~~ist~~ sind, ist nicht einzusehen. Ich vermuthe daß mit den "kürzeren Internodien" gar nicht die "dicken", [illegible], die sehr wohl [illegible] sein können, daß [illegible] sehr häufige [illegible] u. [illegible] Vermehrung haben, [illegible] Grund, [illegible]

Die 2 Knospen. ~~Aeste~~ Internodien zwi-
schen je ~~einem~~ zwei langen. Nelumbium
wächst so:



l langes Internodium, im Durchschnitt
höchstens fingerdick, aber bis 1½ Fuss lang
K u K' zwei kurze Internodien.
I erstes Blatt, nach unten gekehrt.
II 2. Blatt, unter ½ Divergenz, nach
oben gekehrt.
III 3. Blatt, Laubblatt. Dies steht
in unerhörter Weise in einer Dreiheit, so weit
ich weiss, d. h. Braun, zu Blatt 2. unter
⅓ Divergenz, obgleich beide mitten im Knoten-
stehen.
s Stipula zum Laubblatt
a Ast in dessen Achsel.
In der Achsel des Blatt II steht die Blüthe.
Trecul, der Pflanze untersucht hat, hat in
mehreren Aufsätzen. und kommt zur Meinung I,
II u. die Stipula für 3 Stipeln des Laub-
blatts erklärt u. die Blüthe übersehen. Der
Ast hat das 1. u 2. Blatt auch in derselben

Richtung, doch dürfte kommen zu öffnen
war. Wenn ich die Frage jetzt stelle, die
Gewächshäuser von Braun, und denn ich
nach und jetzt gekommen in Berlin
die Pflanze untersucht habe; noch ist die
richtige Beschaffenheit der Blattstellung
nicht verständlich; aber doch ich habe
nun wohl davon in der Beschreibung zu
der obig. vorgestell. natürlich. Unsere gegeben
ist kann [illegible] übergangen als entsprechend der
Umstand bei der spiraligen Blattstellung
hinzu, daß Blatt I von der Achse, die
fortwächst, durchbohrt wird und nach oben zu
biegen kann, so:



bei A Loch der Durchbohrung. I hat also nach
R den Rücken und nach O die Innenseite.
~~Nuphar~~ Nelumb. luteum ist davon
gar nicht von Nel. speciosum verschieden
wenn die Pflanze, die mir Wendland früher
als Nel. luteum geschickt hat, das ist wahr.
Die Japaner und Chinesen essen die

diesen ~~gefüllten~~ [illegible] Rhizome
der Nelum. spec., die gerade anfingen
mir das Interesse von Dr. Hilgardt
[illegible], ob auch dieser; v. Siebold hat
mir Abbildungen gezeigt. Im getrockneten
Zustande sind sie wieder [illegible], [illegible] [illegible]
ob Nel. luteum ein Gewächs ist, ist
mir sehr zweifelhaft. Ich kenne keinen
Unterschied als den der [illegible]
die bei ihm linear sind, während die
bei Nel. ~~sa~~ speciosum kuglig sind, also
ein sehr geringer Unterschied. Auch soll
Nel. luteum mehr Kälte als Nel. spe-
ciosum aushalten. — Ich wünschte sehr ich
wäre Professor u. hätte einen guten botan.
Garten zu kommandiren, denn wollte ich
die Sache untersuchen, indem ich die
beiden Pflanzen vergleichend kultivirte.
[illegible] [illegible] die [illegible] [illegible]
einmal Samen erhalten von Nel.
luteum. ~~[illegible]~~ Nelumb. codophyllum Raf.
ist, weiss ich noch weniger. Ein
Botaniker ohne Garten u. ohne Verbindun-
gen, [illegible] Gärtner ist übel
dran. Bracht ist sehr geschäftig u.
hat [illegible] [illegible] Mühe gehabt, [illegible]
[illegible], da ich [illegible] [illegible]
zu sagen hätte, [illegible] [illegible] meiner
Sache angenommen [illegible] [illegible] [illegible]

über Jahre und gedacht ~~[illegible]~~ L[illegible],
zur Vermittelung genauester Beugung, die ich
gestellt habe, anstellte. Sinning hat sich
zu [illegible] auch; ich habe von ihm so gut
wie gar nichts in dem hiesigen Garten. Man
sollte nicht meinen, daß ein Gärtner so
durchaus sein könnte, beim besten Willen
[illegible] nicht selbst [illegible] daß ich wünschte
auszuführen. Nach etwa 2–3 Monaten
ist jedes Mal alles zu Ende. Wie lange
hat Nymphaea alba z. B. gebraucht, um
zu blühen von der Keimung an, ich weiß nicht
kommt. Im vorigen Jahr hat ich Sinning
sehr gesprochen [illegible], in einem
Kasten, zu pflegen, etc., im darauf-
folgenden Jahre sind alle herausgewachsen
die ich aus mehr 500 Samen gezogen
u. mehr; ich später [illegible] noch, was
ich [illegible] haben mußte; jeder Versuch
Sinning zu meinen Arbeiten zu ge-
brauchen war bis jetzt umsonst [illegible].
Die [illegible] ich zu [illegible] bei besten Kräften,
den Dienst zu ändern, wenn 2 [illegible] / [illegible]
beim Herrn Minister; Treviranus u. Sinning
die besten Mittel (der Garten hat 2500
Thaler) verwendet, so daß ich u. Niemand
[illegible] hat, als nur zu [illegible]
u. botan. [illegible], welche im Garten
wirklich [illegible] werden.
Der [illegible] Eichhorn [illegible] jetzt

MISSOURI BOTANICAL GARDEN
copyright reserved
0 1 2 3 4 5 6 7 8 9 10 cm

Rec.Frankfurt Nov.13
Ans. Dec. 7

Poppelsdorf Nov. 9,1857

My dear Friend !

Best thanks for your letter and the news about Nuphar _____ and Nelumbo luteum ; but it is wrong, that you do not write even a single word about your health and your family, or about your plans, though I would like naturally to know something, or,rather a lot about you. It is very kind of you, and I acknowledge my thanks, that you have written to America in order to obtain information about the two Nymphaeas. Of course, the description of the Nelumbo is somewhat incomplete, as you say. One can not see, how the shorter,thick internodes differ from the other, 6" long ones,which, according to the sketch are themselves 6 " long. I assume, that the shorter internodes do not refer " at all to the thick" , flour-rich,which could very well be woody,meaning,that they have very woody cross cuts and flour-rich parenchyma,but rather the 2 short internodes between each od two long ones. Nelumbium shows them:

(see drawing on page 2 of letter)

C long internodium; at most finger-thick in greenhouse, but to 1½ feet long

K and K' Two short internodia

I first leaf, turned downward

II second leaf, under ½ divergence,turned upward.

III Third leaf, foliage leaf,positioned in an unheard of way without exemple,as far as I know,meaning Braun,with 1/1 divergence with leaf 2,though both stand in the middle of the stem

s stipule to foliage-leaf

a branch in..... axill

In the axis of leaf II stands the flower

0 1 2 3 4 5 6 7 8 9 10
cm
copyright reserved
Missouri Botanical Garden

Torcel, who examined poorly, declared in several theaties in carefull ways, that I, II and the stipule were 3 stipules of the foliage-leaf, and overlooked the flower. The branch has the 1 and 2 leaf also in the same direction, but this happens often. What I say here has all the approval of Braun, with whom I examined the plant still in the Fall in Berlin. The correct arrangement of the leaf position has not yet been published; but anyhow, I have ~~xxxxx~~remarked about it in the agenda of the Rhenish-westphalian Nature science Society. Besides, it is surprising, that with the difficult position of the leaves, that leaf I is being drilled through by the axis, which continues growing and comes to rest on top, e.g.

(see drawing on page 3 of letter)

Near A hole of drilling through. I - has now "R" the back and also "O" the inside. Nelumbo luteum is in this not at all different from Nel. speciosum, if the plant, which Wensteed (? E.D.) sent me, was that.

The Japanese and East Indian species have the thick, flour-rich rhizomes of the Nelumbo species, which look exactly like the illustrations by Dr. Kilgardt (could be Wilgardt ? E.D.), often even thicker; v. Siebold never showed illustrations. In the greenhouse they neither get as thick nor as floury (mealy, E.D.). If Nelumbo luteum is a species, is very doubtful to me. I know of no difference but that of , which is linear for it, whereas the Nelumbo species are , thus a very small difference. - I wished, I were a professor and had to boss a large botanical garden, then I would examine the matter by cultivating both plants in quantity. May-be, you can send to me later sometime seeds of Nel. Luteum. What Nelumbo rodophyllum is, I know even less. A botanist without a garden and attentive gardeners is in bad shape.

0 1 2 3 4 5 6 7 8 9 10 cm
copyright reserved
MISSOURI BOTANICAL GARDEN

Brecks ' is very accomodating and has done much for me, but he is unable, because I have nothing officially to say, to apply himself so much to my cause, that he would organize lectures spread over the years, to explore questions, which I have posed. Finning here is'nt good for anything; I have almost nothing from him in the local garden. One should not believe, that a gardener would be so incapable, to maintain his best mother (? E.D.) cultures, which I wished to pursue. After 2 - 3 months all is at an end every time. How long it takes e.g. for Nymphaea alba to flower from the time of germination, is unknown. Last year I gave Finning numerous seedlings in a basin for cultivation; well, in the Spring of this year he threw them all out. That is the way it went with 100 cases and more; I thus apportion only, what I must have urgently; every attempt to use Finning for my efforts ends in vexation. Thus I must look, to change the matter to the best of my ability, as two useless human beings, Trevianus and Finning waste the best of resources (the garden has $ 2,500), so that I and nobody else gets anything out of it, except several male and female cousins of Brugwutter ? E.D., of which the garden is amply provided.

Mrs. Emmy Eichhorn is again not doing as well as a few weeks ago, when the applied remedies did good work; she is with the family, and goes once in a while out again. Braun however, is not at all really well; since he had the he was
Now he suffers from a rheumatisme, which drawn from the arm to the breast in the direction of the heart with pains in the breast and palpitations. When he feels very week, he takes Colchicum. He is also very discontent with the collegium, which during Winter is always poor for botanists. He has in the officinal flowers (plants, which are used for therapeutical purposes, E.D.) only 7 hearers

0 1 2 3 4 5 6 7 8 9 10 cm
copyright reserved
Missouri Botanical Garden

(the German word for "enrolled students" E.D.); in the public (Public lectures, E.D.) (General Natural History) there are 60. Treviranus has 2 students as his audience; and I have 1 as Private docent and 1 in public lectures. Those are nice feelings ! In Summer I had over 100, but nobody comes any more ~~xxxxxx~~ for exams. - I have worked the last 4 weeks on the cellular structure and in the stem of Nymphaea alba, and had finally yesterday and today results.- Naegeli is totally wrong. The matter is too long to be expressed in the remaining lines. Best greetings to your wife and Georg. With best greetings Your

R. Caspari

(translated from incredibly poor German script by Edgar Denison July 1988)

0 1 2 3 4 5 6 7 8 9 10 cm
copyright reserved
MISSOURI BOTANICAL GARDEN

Rec: Frankf. 11 Dec
Ans 13 Dec

Poppelsdorfer Schloss
Bonn
den 8. December 1857

Lieber Herr Doktor!

Besten Dank für Ihren netten
Besuch, den ich aber verschlafen habe
(Abends 7 Uhr). Dein Freund ein braver,
theilnehmender Mensch; das Herbarium
[illegible] erkennen ich mit grossem Dank an,
und Sie machen solche Funde so selten
sind. Ich danke Ihnen sehr für die
Abbildungen der Nymphaea und ihrem
Genuss; dessen Längsschnitt ist mit
[illegible] in der Tafel mir nicht vorgekom-
men. — Sie sagen Sie hätten auch ein
bräunlichen Blüthenstand eines ägyptischen
Cyperus gesehen. Wissen Sie denn das nicht,
woher auch die [illegible], wie die
[illegible] bekannt in ihrem Blüthe?
Hoch verehrt ich Ihre Fragen:
ob ich in Wien etwas zu bestellen habe?
Grüssen Sie Fenzl, Unger, Kotschy;
mehr kann ich Ihnen nicht zu sagen.
Sie werden hören, Sie möchten von allem
was hier erscheint ein Exemplar auf die
Bibliothek nach Bonn schicken, denn diese
Universitätsbibliothek bedarf dessen. Wären
Sie frei, so gäbe ich Ihnen gern ein Brief
für Fenzl mit; einen Theil von Weddells

[illegible]
[illegible]
[illegible]

Utricularien, den Knospen mir per Post
geschickt habe ich nicht ihm aber jetzt
gerade zu schicken. Sollte es Ihnen
möglich sein aus dem Werk von Ettings-
hausen u. Pokorny mir die Blätter mit
den Naturselbstdrucken von Nymphaea
alba u. Nuphar luteum zu besorgen,
so würde mir das sehr lieb; ich habe sie
bis jetzt nicht gesehen. Das ganze Werk
kostet 400 fl. u. ist hier nicht vorhan-
den. — Wie lang werden die langen u.
kurzen Internodien der Eisblumen Nelum-
bien? Die längsten 1½ – 2 Fuß, aber
nicht dicker als ein Zeigefinger; die kurzen
Internodien etwa ⅓ – ½", auch oft noch
nicht. — Mein Ewiger Victoria befindet
sich ziemlich wohl u. ich fürchte einmal
sie blühen zu sehen. Letzte Zeit hat Meri Braun
[illegible] Zeichner ganz tüchtig die Blätter
bekommen, die jetzt durch die Reih
durch die ganze Familie wandern wer-
den. — Daß Ihre Frau krank ist,
thut mir sehr leid; hoffentlich bessert sie
sich bald; sie hat ja später in Ameri-
ka Zeit genug zum Krankseyn, jetzt
steht Ihr ja eine schöne Reise bevor.
Ich ginge gern mit Ihnen, noch
lieber aber nach Aegypten, um ein-
mal an Ort u. Stelle die lebenden u.
die auch Stein verzeichneten Nymphaeen
zu sehen u. würde mich Pesth mit dem

MISSOURI BOTANICAL GARDEN

0 1 2 3 4 5 6 7 8 9 10 cm
copyright reserved
MISSOURI BOTANICAL GARDEN

denk, daß der Garten vollständig un-
nütz ist. Was ich brauche bezieh ich jetzt
sehr schlecht aus Berlin. Bouché ist immer
freilich krank und zu Hause, aber jetzt
[illegible] [illegible]. [illegible] er sich [illegible];
wenn er es nämlich versucht hat, bestandene
Tauschstelle zu Tauschungen, [illegible], Samen-
bitten; sollten Sie die Krankheit oder Ihren
Zustand deswegen nöthig haben, so ist wenn
der Buchdruck [illegible] [illegible]. [illegible] [illegible] [illegible]
[illegible]. — [illegible] der Untersuchung habe
ich Nymphaea alba, biradiata [illegible], [illegible]
[illegible] u. Nym. Lotus dentata [illegible] ; [illegible]
[illegible] sind 1–16 Gefäßbündel, [illegible] [illegible]
nicht 1 wie Naegeli behauptet u. [illegible] [illegible]-
[illegible] Gefäßbündel [illegible] [illegible] [illegible] [illegible] [illegible]-
[illegible] [illegible], obgleich Naegeli [illegible] [illegible]
zu [illegible] behauptet. – [illegible] [illegible] [illegible] [illegible] [illegible] Nym-
phaea [illegible]. [illegible] [illegible] [illegible] 1 [illegible].
[illegible] [illegible] [illegible] [illegible] Herrn ~~[illegible]~~ Gay u.
[illegible]. [illegible] [illegible] [illegible] 1–2 [illegible] [illegible]
von Sternbergia colchiciflora haben, [illegible]
[illegible] [illegible] [illegible] [illegible], [illegible] [illegible] [illegible] [illegible] [illegible]
[illegible] [illegible], [illegible] [illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] ~~[illegible]~~ [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible]; in Berlin [illegible] [illegible] [illegible]
[illegible]; Bartling in Göttingen, [illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] ~~[illegible]~~ [illegible] in Wien 1–2
[illegible] [illegible] [illegible], [illegible] [illegible] [illegible]
~~[illegible]~~ von Gay [illegible] [illegible] [illegible] [illegible] [illegible], [illegible] [illegible]
[illegible]. [illegible] [illegible] [illegible] [illegible]! [illegible] [illegible]
an Ihre Frau u. [illegible]. [illegible] [illegible] [illegible]

Ihr R. Caspary

[illegible] [illegible] [illegible] [illegible]. / [illegible] [illegible] [illegible] [illegible] [illegible]

Rec. Frankfurt Dec. 11
Ans. " 13

Poppelsdorfer Schloss
(Poppelsdorf castle)
Bonn December 8,1857

Dear Sir Doctor !

Left-hand margin of page 1 :

At Braun almost all are sick. He and his wife are half well. Ernst and Caecilia have poorly developed scarlet fever, and in combination bad rheumatic fever over the entire body. Hermann has real scarlet fever, and Mathilde has also become indisposed. My fiancée is still well.

Best thanks for your esteemed letter, which I received just now (evening 7 o.c.). You are a kind, sympathetic person; that I enjoy and accknowledge with much thanks, the more so, as such people are so rare. I thank you much for the illustrations of the Nymphaeae with your greetings; I never met with this composition before, when you say, that you saw in the British Museum an egyptian papyrus. How did it look, probably also as shaped as with the and without flower.?? First I amswer your questions. If I have anything to be arranged in Vienna ? Greet Feazl and Unger and Notsky; I do not know more people there, and tell the people, they should send a copy of all they write to the library in Bonn, because this library has need for that. If you were here, I'd give you a book for Feazl: a part of Weddell's Urticaceae, which he has sent to me for Feazl, but I shall send it now . If you should be able, to get for me out of the opus of Effighausen and Soivony the pages with the nature-self-prints of Nymphaea alba and Nuphar , I would be much obliged; I have not seen them up to now. The entire opus costs 400 fl (florin, E.D.) and is not available here. How long get the long and short internodes of the ~~of the~~ Twerthaus Nelumbo ?? The longest ones are 1½ - 2 feet, but not thicker than a forefinger; the short internodes about 1/3 - ½ ", and even that mostly not.

Mrs. Emenz Eichhorn is rather well, and has been recently in Aachen.

0 1 2 3 4 5 6 7 8 9 10
cm
copyright reserved
MISSOURI BOTANICAL GARDEN

Unfortunately, Marie Braun's youngest daughter got quite suddenly the measles, which will probably ~~will~~ go through the entire family.- I am very sorry, that your wife is sick; hopefully she will get better soon; to be sick, there is later much time in America; now, a beautiful trip is ahead of her. I'd love to go with you, to see in their proper place the living and genetically related Nymphaeae, and would touch Scott with the emperor's beard, to see there the N. lotus, which Deb. elevated entirely wrong to the species N. thermalis.- From this Mihowskey also separated it. It must be extraordinary, of that I am convinced. I recently had here one of Nachet's large instruments; one of my students, for whom I had ordered it, showed it to me. It is a joy to work with, and one has to return to one's own imperfect instrument with repugnance.

You ask, how I am ? Really not at all. I am forced too learn patience at this time in the hard school without loss of time and resources. It is not a small item, to have to be a spectator while an old, run-down, dull almost childish man reads the principal collegia, and who mixes up the botanical interests, as far as they get in touch with him, thoroughly in all directions and destroys ~~them~~ with ease, what could be kept in good shape. And, when one must observe, how a vain, almost useless garden inspector, who manages a botanical garden with a budget of 2,500 Thaler (Dollar, E.D.) so poorly, using them for his own interests, to such an extent, that tha garden is totally useless. What I need, I order always from Berlin. Neering is always most eager to be of help, but always explains "What he has he gives, when he has it in quantity", specially flower arrangements for engagements, baptismes and dinners, and balls; if you or your friemds in Frankfurt have the need, then turn to him. Dinning serves with pleasure.- Since the meeting I

0 1 2 3 4 5 6 7 8 9 10 cm
copyright reserved
Missouri Botanical Garden

analyzed Nymphaea alba, Victoria regia, ,and Nym. Lotus. In the works are 1 - 16 vessel-bundles, do not germinate (as Naegeli demands,and the middle vessel-bundle of the leaf never goes to the lower bundle,though Naegeli demands this with caution) I do nothing else, but work on the Nymphaeae, I lecture only once per week.

One more request in the name of Gay and for him, I would like to have 1 - 2 good tubers of Sternbergia colchiciphera ? ; there are none in Paris; one I sent him from Finning, which gave ..... only from leaves,as he had it from old times; in Berlin there is no plant; Barthing in Göttingen, to whom I wrote,did not answer. If you can obtain in Vienna 1 or 2 tubers,please send them by mail either to Gay or,first, to me, as you please. Now, stay well. Best greetings to your wife and Georg. With best greetings

Your R. Caparyy

(translated from German script by Edgar Denison, July 1988)
A few words I could not decipher - they are underlined in yellow

0 1 2 3 4 5 6 7 8 9 10
cm
copyright reserved
MISSOURI BOTANICAL GARDEN

Recd. Paris 31 May
Ans Kew 5 Jun

Poppelsdorfer Schloss
Bonn am Rh.
den 29. Mai 1858

Mein lieber Herr [illegible]!

Besten Dank für Ihren letzten Brief, [illegible] Mittheilungen von Nelumbium u. Nymphaea coerulea Sav., den ich gestern Abend hier vorgefunden, als ich um 10 ½ Uhr aus Moresnet zurückkam, wo ich einige Tage [illegible] (8 Tage) [illegible] Briefe [illegible] Ihren [illegible] Nelumbium [illegible] [illegible] zu

cm 0 1 2 3 4 5 6 7 8 9 10
copyright reserved
MISSOURI BOTANICAL GARDEN

MISSOURI BOTANICAL GARDEN
copyright reserved
0 1 2 3 4 5 6 7 8 9 10
cm

MISSOURI BOTANICAL GARDEN
GEORGE ENGELMANN PAPERS

0 1 2 3 4 5 6 7 8 9 10
cm
copyright reserved
MISSOURI BOTANICAL GARDEN

Dr. G. Engelmann St. Louis

Rec'd Sept 20.
Ans Nov 12

Koenigsberg in Pr.
10. Februar 1865

Lieber Freund!

Empfangen Sie besten Dank für Ihren werthen Brief vom 12. Decbr. 64, den ich vor 8 Tagen durch A. Br. erhielt. Die Nachricht, daß es Ihnen endlich gelungen ist Nelumbium luteum von Ritter wieder zu erhalten und auch sogar eine Landschaft mit Nelumbium ihr mir schickt, [illegible]. Es scheint mir fast ich hätte zu viel von meiner Bitte von Ihnen [illegible] vertrauliche [illegible] Gabe als Geschenk annehmen zu sollen. Sie werden [illegible] ich hatte Sie sehr gebeten: daß die Kosten für mich wollen zu tragen nach meinem Lasten. Jedoch, da Sie jetzt mir nur [illegible] als Geschenk senden wollen, kann ich dies nur unter einer Bedingung annehmen: daß Sie mir gestatten Ihnen auch [illegible] Bitten anzugeben und daß ich mich nicht [illegible] von solchen Bitten abhalten lassen darf, daß solche Auslagen verursachen, die Sie dann aber in der That auf meine Lasten machen wollen. Ich freue mich sehr auf die Landschaft, [illegible] Zweifel setzen Sie mich dadurch in den Stand zum ersten Mal eine wirklich gute Zeichnung von Nelumbium luteum, wie es im Vaterlande wächst, zu veröffentlichen. Auch bitte ich sehr, sehr um Ihre Zeichnungen und Alkohol-Präparate von der Pflanze zu schicken. Ich kann Alles gebrauchen und die meisten [illegible] selbst [illegible] untersucht [illegible] Angaben. [illegible] die Pflanze [illegible] zu [illegible] und mit den [illegible] Entwicklungszuständen zu betrachten. [illegible] bitte ich es, daß Sie die Samen durch den [illegible] Sie schicken; [illegible].

Parry's Nuphar [illegible] ist wirklich eine gute Art und recht eigenthümlich. Sie machen mir die Mittheilung nach seinem „Notiz". Sind diese schon gedruckt? Oder nicht? Sollten sie irgend wo gedruckt werden, so bitte ich sehr um Zusendung des Gedruckten.

Ich bitte Sie auch sehr, daß Sie es irgend wie zu bewerkstelligen suchen, daß ich die Pflanze selbst (Nuphar

Blüthen) zu sehen bekommen. Es ist diese Pflanze doch dieselbe, von der Sie mir schon einige Male schrieben, daß Torrey sie in d. Rocky mountains gefunden habe ~~hat~~, obgleich er sie noch nicht zur Beschreibung erlangt hätte u. von der Sie mir [illegible] einmal ein Stück derselben schickten, daß ich also nicht von meinem Nuphar [illegible] [illegible], die es doch auch keine Staubfäden [illegible] zeigte? Ich bin begierig zu sehen, ob es wirklich gar keine Staubfäden hat.

Ich habe an bekannter Stelle geschrieben: „die Nuphar advena ist die [illegible] mit karminroth [illegible] gefärbten Blumenblättern u. Spitzen der Kronenblätter [illegible], als die ganz gelb gefärbten". Wie können wir diese Ansicht her kommen? Sie halten sie immer und gelb gefärbt alle Schriftsteller (Elliott, Gray, Beck, Torrey) auf. Elliott u. Beck habe ich nicht zur Hand. Torrey (Fl. New-York 1843. I 40) giebt aber die Farbe der Blätter u. Stam. richtig an, ebenso wenig Torrey & Gray (Fl. North. Amer. I 57.). In meinem Auszuge aus Asa Gray's Manual habe ich leider nichts über die Farbenangabe. Dagegen bildet Aiton (Bot. Mag. XVII 684) die Blüthe mit Stam. ab, deren Connectiv u. ~~die~~ Ränder der Antheren roth sind, (Reichenb. Fl. exot. I t. 12 bezieht sich) ~~[illegible]~~ [illegible].) – aber in der Beschreibung erwähnt Aiton nichts vom Roth. Die einzige mir bekannte nach [illegible] gefüllten Abbildung der Nuph. advena (Willd. hort. berol. t XXXVIII) hat die Stam gelb (Roth nicht zu sehen). Aiton (hort. Kewens. 1789. II 226.) nennt die Bott. [illegible] lutea-flavicantia u. die Filament. flava, aber „medio rubra". Muhlenberg (Cat. Pl. Am. sept. 1813. 52) nennt Nuphar advena „striped flowered" u. ~~lutea~~ Nuphar lutea „yellow-flowered", das „striped-flowered" geht doch wohl auf die rothen Streifen, welche die Ränder der ~~Filam.~~ Antheren zeigen. – Sämmtliche ~~[illegible]~~ [illegible] Blüthen von Nuphar advena betrachte ich – ich untersuchte sie [illegible] u. in verschiedenen Jahren aus dem bot. [illegible] [illegible] [illegible] im [illegible] [illegible], welche nicht auch der [illegible] [illegible] die meisten) einen 1 großen oder 2 kleine rothe Flecken gehabt hätten, die [illegible] [illegible] ich nur roth [illegible]. An dem [illegible] [illegible] [illegible],

MISSOURI BOTANICAL GARDEN
copyright reserved
0 1 2 3 4 5 6 7 8 9 10 cm

GEORGE ENGELMANN PAPERS
MISSOURI BOTANICAL GARDEN

Missouri Botanical Garden
copyright reserved
0 1 2 3 4 5 6 7 8 9 10 cm

E.D.

Rec. Sept. 20 (why the 7 months delay ?)
Ans. Nov. 12

Königsberg in Preussen
Feb. 10, 1865

Dear Friend !

Receive my best thanks for your letter of Dec. 12, 1864, which I received recently through A.Br. (Prof. A. Braun, E.D.). The news, that you were finally successful to have Nelumbium painted by Ritter, and even in a landscape with Nelumbium, is most, most welcome. It seems to me to be too much for my part, to accept such an outstanding and costly present as a gift. You know, I had asked you strongly, to have these items painted at my expense. But now, that you want to send to me such a gratifying gift, I can only accept this under one condition: That you permit me to approach you with various requests, and that I am not prohibited from such requests herewith, and that, if these will cause expenses, you will make them at my expense. I anticipate with joy your shipment just like a child, because without doubt you put me into positions therewith, to publish for the first time a really good drawing of Nelumbium luteum as it is colored in its homeland. I also ask you very, very much, to send me your drawings and alcohol preparations of the plant. I can use everything, and you know yourself, the more one sees and examines, the more correct and understandable are the statements. Very desirable would be numerous, ripe seeds, inorder to grow the plant here if possible, and to observe it living with relatives in its developmental stages. I would consider it best, if you would send the items through the Smithonian Soc. There is no hurry.

Parry 's Nuphar pictum (prictum ? E.D.) is really a good species and quite strange. You give me the information from his " Notis". Have these been printed ? Probably not ? If they should be printed sometime, I ask to have the printing sent to me. I also ask you very much, to arrange, that I may see the plant (Nuphar prictum) if you can possibly do so. This plant is the same, of which you wrote me several

0 1 2 3 4 5 6 7 8 9 10
cm
copyright reserved
MISSOURI BOTANICAL GARDEN

times, that Parry had found it in the Rocky Mountains, though he had not described it, and, of which you sent me at one time a piece of sepalum, which I doubted as coming from a Nuphar, as it did not show any stem-hair at all on the inside? I am anxious to see, if it really has no stem hair. In a well known place I wrote: " With Nuphar advena the color variety with carmin-red petals and tips of the lomanties is more common, than the entirely yellow colored ones. " You ask, where this news comes from? You saw the always only yellow and all florists the same way (Elliott, Gray, Beck, Torrey). I do not have at hand Elliott and Beck. Torrey (Fl. of New York 1843 I 40) does not give any information about the color of petals and ....., neither does Torrey and Gray (Fl. North Americ. I 57). In my excerpts from Asa Gray's Manual I have unfortunately nothing about color indication. However Aiton (Bot. Mag. XVII 684) illustrates the flower with stem, who'se joints (? E.D.) and rims of anthers are red, (Reichert Fl.exot. I t.12 notes this also) - but in the description he mentions nothing of red. The only other existing colored illustration of ~~Nymphaea~~ Nuphar advena (Wittv. hort. berol. t XXXVIII) has the stem yellow (Petals not to be seen). Aiton (hort.Ravens. 1789 II 226) calls the petals rubro-flaviscantia and the filaments flava, but medio rubra ? Umberg (could be Amberg, E.D.) (Cat. R. Am.sept. 1813 S 2) calls ~~Nymphaea~~ Nuphar advena "striped-flowered" and Nuphar luteum (the species name shown in the original is "leum", E.D.) " yellow-flowered". The "striped-flowered" refers assumedly to the red stripes, which show the rims of the anthers. Further, I have not seen a flower of a living Nuphar advena.- I examined the numerous and from different years from the hort.lipsiensis (Leipzig Botanical Garden, E.D.) , where they prosper beautifully in the open, which did not show on the inner axis of the petals (most of them) a 1 large or 2 nice red spots, the majority I saw had red rims. On the numerous dried material I could of course not discover any color.

0 1 2 3 4 5 6 7 8 9 10 cm
copyright reserved
Missouri Botanical Garden

Authors, who probably describe dried material, do not mention the color of the various parts, or, their descriptions are generally too short. When certain writers, e.g. Darlington (Fl. Austria), Aiton name the petals "yellow", I interpreted this, that they give the color incomplete, because I saw them in fresh state only yellow. Nothing is more common than incomplete designation of colors. Thus the petals of Nymphaea stellata ( ) are always described as blue. They are never blue, exactly speaking, because their base is always whitish or yellowish. It is thus easily explained, that I expressed myself about the color of the petals and stamens of Nuphar advena as I did. It is the more interesting to hear from you - and you are the first credible man, who has examined the problem completely, as I believe - that you have seen red-spotted petals (also stamens ?). I want to ask you very much, to take this point in as many localities as possible into view and examine, and to give me information about it. But still one more large request !

You probably have also Nymphaea odorata Aitin numbers. I did examine Nymphaea odorata alive and posess material in alcohol, and received now seeds from Ida Agassiz, which germinate beautifully, but I can not determine varieties from the plants. What others assign as variety characters : Smallness (var. minor) is not justified to form a variety. Small plants become always quite large ones in rich soil according to my experience, though not the largest. As criterion for varieties are to be considered 1) morphological conditions, such as the form of fruit especially, of the leaf, etc. 2) physiological characteristics as: size of degree of opening, color and such. I permit myself to ask you strongly to look in your area, if you can not find real differences in the form of fruit, the form of the leaf for the determination of varieties of Nymphaea odorata .

0 1 2 3 4 5 6 7 8 9 10 cm
copyright reserved
Missouri Botanical Garden

By analogy with Nymphaea alba - I assume you own my dissertation (Appendix hort.bot. berol 1854) ("berol" = of Berlin,E.D.) - ..... otherwise very probable. I urgently ask,to do the same for Nuphar advena, and I hope to mail to you before Spring a list of points,which must be considered for this plant. You would advance the cause very much through such studies.

I want to include in my wotk a historical portion,which gives the biography of the collectors, who often dared their lives and were in danger. For this reason I urgently ask you to provide me with a sketch of your own and of Parry. I need time and locality of birth,main history of life,and, if possible, the presentation of the educational process in short strokes, as given in a sensibly arranged curriculum vitae in a promotional dissertation.

Best greetings to your wife and Georg. We are quite well here. My wife is under much stress, because the youngest childe, Johannes, born Nov. 19,1863, sleeps during most nights very little, often not at all. Nevertheless, he is during daytime very alert & alive and crawls around our home,but talks only a few words. The older girl, Mathilde, born March 20, 1861, gives us much joy, as she is a very capable child with an extraordinary memory,and me - morizes for declamation entire books of poems. She knows already very many plants; all in Dreco's picture books. We plan to have our picture taken in Summer,then you shall get also a photograph of us all. - The ministry appropriated more than 4,000 Thaler for the construction of a magnificent - the largest of all - Winter-plant house in the local botanical garden. The construction was begun last year,but, unfortunately, not completed,and I fear, it will be too late this year, to get it finished,to grow already this year successfully Nymphaeaceae. But I have otherwise several basins in the houses and in the open,also a pond; In it I have also Nuphar

0 1 2 3 4 5 6 7 8 9 10 cm
copyright reserved
Missouri Botanical Garden

advena , growm from seeds from Leipzig. But of 12 plants only one remains, and apparently the Summer here is too cold. It flowered only 2 - 3 times. Of foreign Nymphaeaceae I have a large, living collection, also the Swedish carmin-red one, ehich is deeply red as Nymphaea rubra Preb. ; it is like N .alba, but I must determine the variety through further observations. I received 5 plants in the Fall of 1863. On top of this, I have all houses full with Nymphaeaceae, mostly in large vessels . I study them in all directions, to determine the species. The tasks costs much, very much time and maximal attention. To complete the work, I will certainly wait until the crosses of Nymphaea alba flower, which are now only 2 years old. Brasenia peltata I also have many, which nobody else has in Europe, but I cannot get them to flower. Would you not have the op= portunity to give me the address of somebody, who could collect Cabomba carstiniana in alcohol or send seeds in moistened charcoal, so that I could grow the plant here.! I know very little of Cabomba, despite seing, what there is in Europe. Now, again heartiest thanks for your supreme gift. Do not scold about my numerous requests.

(There is no signature ! E.D.)

Translated from German script by Edgar Denison, August 1988)

0 1 2 3 4 5 6 7 8 9 10
cm
copyright reserved
MISSOURI BOTANICAL GARDEN

Rec. March 14th 1865
Ans. July 30, 1865

Königsberg in Pr.
9/2/65

Lieber Freund!

Was Sie von mir denken — [illegible] weiß ich nicht, aber wenn Sie [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]. Warum habe ich [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] für Ihre [illegible] [illegible] vom 6. Septbr 1860 u. 5 Nov. 1860 [illegible]? [illegible] [illegible] [illegible] [illegible]: ich war [illegible] in meinen [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] E. Meyer [illegible] [illegible] [illegible] [illegible] Literatur [illegible] 109 [illegible] 4000 Thlr. [illegible] [illegible] 1860 [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]

Missouri Botanical Garden
copyright reserved
cm 0 1 2 3 4 5 6 7 8 9 10

GEORGE ENGELMANN PAPERS

Missouri Botanical Garden
copyright reserved
cm 0 1 2 3 4 5 6 7 8 9 10

Missouri Botanical Garden
George Engelmann Papers

Wir haben Ihrer u. Ihrer [illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
— [illegible] am 30. Mai 1861 [illegible]
[illegible]
Mathilde [illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible] Nymphaeaceen [illegible]
— [illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
Ihr
R. Caspary

Ihr ganz
ergebenster
R. Caspary

Rec. March 7th

Königsberg in Pr.
10. Februar 1866

Lieber Freund!

Ihren Brief vom 6. Januar 66 habe ich heute erhalten und den ohne Zweifel den meinigen vom 22. November 1865 mit den Juncus-arten, die Sie aus Meyers herb. genannt haben zu kennen wünschten. Ich schrieb Ihnen damals, daß mir Nymphaea odorata mit gelblicher Behaarung des Blattstiels, oben, unbekannt sei. Dieß ist unrichtig. Ich habe diese Frage für Miquels Ann. Lugd. Bat. N. odorata nach dem herb. Lugd. Bat. beschrieben und bei der Gelegenheit alle meine Aufzeichnungen durchgesehen und finde, daß ich am 10/4/1856 im botan. botan. Garten an den dortigen lebenden Exemplaren die [illegible] untersucht habe; sie zeigen deutlich als N. versicolor, discolor, pygmaea, aber alles ist N. odorata, mehr oder weniger roth auf dem Blatt [illegible] gefleckt und mehr oder weniger mit 2–10 gelblichen [illegible] Haaren (auf dem Blattstiel) besetzt. [illegible] ich in [illegible] ~~[illegible]~~ sehe im herb. J. Gay Blätter mit lang behaarten Stiel und unter den Exemplaren ~~aus der~~ der Nymph. odorata, die ich aus den meisten europäischen Herbarien gesehen habe, finde ich mehrere (I h. Lugd. Bat. Ch. Wright. Texas – h. Sonder. Schlottmann. Texas – h. Monac. Louisiana. Ded. A. Gray. etc). mit zum Theil dicht ~~bei~~ gelblichen Haaren-Anlagen zu kennen, als [illegible] gefallen [illegible] langen hat jeder ~~[illegible]~~ Blattstiel von N. odorata, aber mehr oder weniger [illegible] ~~[illegible]~~ wenig, oder kahl [illegible] in frischer Jugend und vergangen der Spitze. Ich habe nun in Miquels Ann. Lugd. Batav. 2 Formen unterschieden: N. odorata I glabra, petiolo folii adulti glabro und II villosa, petiolo folii adulti plus minus in parte superiori villoso. Diese

Gebrauchte [illegible] ich hielt

MISSOURI BOTANICAL GARDEN
copyright reserved
0 1 2 3 4 5 6 7 8 9 10
cm

der Pflanze, die ich vor neun Jahren in meinem Material
nicht sah [illegible] erwähnt. Aber trotz dem Umfange [?] bestel-
len wünschte ich dringend zu meiner Bitte, daß Sie
vorher in Amerika selbst umfassende Untersuchungen
über die Varietäten ~~ihrer Pflanze~~ der N. odorata an-
stellen. Das getrocknete Material, bloß abgerissene Blü-
then u. Blätter u. zwar wenig von jeder Art, ~~sind~~
~~ganz [illegible]~~ ist ganz ungenügend, um über
die Spiel- u. Unterarten zu entscheiden. Die bis-
jetzt aufgestellten halte ich ebenfalls für ~~ganz ungen-~~
~~[illegible] [illegible]~~ unzulänglich oder unbegründet.

Spielarten sind begründet: 1) auf die Farbe. Pursh
(Fl. Amer. sept. 1814 II 368) stellt eine Spielart auf
β rosea. Foliis cordatis integerrimis, obtusis;
lobis divaricatis, acutis; petiolis pedunc-
lis foliisque subtus purpureis; calyci-
bus petalisque extus roseis." — "The vari-
ety β is probably a distinct species, which
only further observation can decide." Unter
die Gestalt der Blätter, die Pursh hier noch an-
führt, als Charakter der Spielart, [?]. Ist aber
von der Farbe. ~~[illegible]~~
~~[illegible]~~ Aber liegt in Pursh's
β rosea begründet? Nein! Pursh brachte seine Pflanze
selbst nach England, sie wurde in ~~Kew~~ kul-
tiviert u. war nicht mehr rosig — sondern weiß,
wie Sims (Bot. Mag. Tl. t. 1652) berichtet.
Sims ~~[illegible]~~ giebt aber von der Farbe als
Charakter ab u. sucht zu nennen nach Blattformen,
die Größe, seine [?], er nennt Pursh's Pflan-
ze var. β. minor. Was die Farbe der Blüten an-
betrifft, so ist diese nach dem vorliegenden trockenen
Material u. auch an den in Europa kultivierten Pflan-
zen, ~~[illegible]~~ sie wandelbar, von bläßlichem Karmesin
bis zum ~~[illegible]~~ tiefsten [?], das nicht einmal
nach dem Grunde ~~[illegible]~~ einen Anflug von Karmesin
zeigt, daß man sicherlich nach der Farbe der Blätter
nicht zu unterscheidenden Sammlungen [?] [?].

MISSOURI BOTANICAL GARDEN

0 1 2 3 4 5 6 7 8 9 10 cm copyright reserved MISSOURI BOTANICAL GARDEN

Spielarten darauf zu gründen; [illegible] ~~[illegible]~~ wenn die Farbe sehr auffallend ist, könnte man ~~[illegible] [illegible]~~ Unterart oder Unter-Unter-Spielart darauf gegründet werden. Die β. minor Sims [illegible] ~~[illegible]~~ ist wohl als Synonym von den Verfassern selbst aufgestellt: N. odorata γ. [illegible] Torr. and Gray Fl. N. A. 1838–40. p. 57 und N. odorata var. 2 [illegible] 2 Torrey Fl. Newyork, 1843. p. 38, obgleich [illegible] Merkmale [illegible] [illegible] ergeben sind, [illegible] γ. [illegible] Torr. and Gray u. var. 2. [illegible] Torrey "flowers rosecolored" ~~[illegible]~~ haben. Auch N. odorata 2. rubella Rafinesque ~~"fringed~~ Medic. Fl. 1830 II 48 "fringed with rose" ist als bloss auf die Farbe gegründet eine [illegible] Spielart, [illegible] [illegible] [illegible] 3. chlororhiza "with yellow roots" i. e. rhizomas, which in normal plants according to Rafinesque are "blackish"! Nymphaea alba hat [illegible] [illegible] [illegible] gelbe Rhizome, man aber keine ~~[illegible] [illegible]~~ verschiedene Spielart [illegible], sondern bloss verschiedene [illegible] [illegible] verschiedene [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible].

Was 2) die Grösse der ganzen Pflanze, der Blätter u. Blüthen als Spielart-Kennzeichen betrifft, ~~[illegible]~~ welches Sims [illegible] seiner β. minor [illegible] Rafinesque (l. c.) [illegible] seiner parviflora annahm, so [illegible] [illegible] [illegible] Charakter [illegible] [illegible] [illegible] [illegible] [illegible] die Farbe. Jeder Nymphaeaceen-Züchter weiss, dass die Grösse [illegible], [illegible] u. [illegible] seiner Pflanzen

deren Blüthen u. Blätter ganz von den Wasser[illegible]-
nissen abhängig, welche denn an sich zeigt. Will
man kleine Pflanzen haben, die kleine Blätter u. kleine
Blüthen haben u. meist spärlich blühen, so setze man
Sämlinge in kleine Töpfe u. schlechte Erde; selbst gute
Erde macht sie jedoch auch wenig größer. Will ich grö-
ßere u. schöne Pflanzen haben, so setze ich sie in gute
alte [illegible] Erde in ~~[illegible]~~ ~~[illegible]~~ unmittelbar oder große
Töpfe. Will ich [illegible] große, recht große blühen-
de Pflanzen haben, so brauche ich nur Sämlinge aus
derselben [illegible], welche die [illegible] kleinen Pflanzen in
den kleinen Töpfchen brachte, in frische Erde oder
sehr große Kübel [illegible] bester Erde u. [illegible] Dung zu
setzen. Ausläufer, d. h. die selbst von verkümmerten
Stöcken ~~auf~~ in großen Kübeln auf guter Erde aufge-
kommene Pflanzen erlangen nur alle die bedeutendste
Größe, als [illegible] die [illegible] Merkmale [illegible]-
wachsen. [illegible] in der [illegible] sie in der
freien Natur. Manche Arten ~~[illegible]~~, wenig
Nahrung, meist kleine Pflanzen — u. da der Boden im
ganzen Landstriche ~~[illegible]~~ ziemlich gleich ist, hat man
~~[illegible]~~ sie lange [illegible] blieb, als in ganzen ~~[illegible]~~
Gegenden kleine Pflanzen. Aber bleiben die so, wenn
man sie in bessere Verhältnisse, sehr üppigen, guten
Boden bringt? Durchaus nicht. Ich habe gesehen, daß
kümmerliche Pflanzen von Nymphaea alba u. Nuphar
luteum — ~~[illegible]~~ v. Leonhardi spricht nur immer
sehr wenig [illegible] [illegible] [illegible], die er
für Nuphar pumilum hielt — in guten Garten-
[illegible] gepflanzt, ~~sehr~~ groß u. kräftig wurden, ~~[illegible]~~
~~[illegible]~~ so [illegible] groß u. einen [illegible]
der var. minor u. maxima [illegible]
Werth, der [illegible], daß man gar keine Nym-
phaea hatte. Wenn jedoch bewiesen würde, daß eine
planta nana, ~~[illegible]~~ oder minor auch in besseren Ver-
hältnissen [illegible] klein bleibt, oder gar [illegible]
[illegible], der hat nur selbst var. minor [illegible]
aber ~~[illegible]~~ [illegible] ~~[illegible]~~ Nymph.
odorata var. minor Sims ist ~~[illegible]~~ zu [illegible].

MISSOURI BOTANICAL GARDEN
GEORGE ENGELMANN PAPERS

zur Begründung von Spielarten

6. Dieser als Farben u. bedeutender Größe finden sich morpho-
logische Verschiedenheiten, des Blatts, der Gestalt der
Kelchblätter, ob lang oder kurz, der Staminodien, ob sie
breiten oder schmalen Filamente haben, der [illegible],
[illegible] Narben, der Durchsicht der Eizellen,
ihr Verhältniß der Länge zur Breite, ob sie am [illegible]
geschwollt oder gespitzt sind, die Gestalt der Frucht,
ob kuglig, eiförmig, glatt gedrückt, die Größe
~~der Samen~~ die Gestalt der Nüßchen, deren [illegible]
im Verhältniß zum Blatt ~~[illegible]~~, die Beschaffen-
heit des Pollens, ob warzig, oder stachlig. Ich habe
nur diejenigen morphologischen Punkte aufgesucht, die
bei Nymphaea alba, welche ich bis jetzt aus allen Ländern
frisch lebend oder in Alkohol untersucht habe, zu den
Merkmalen ich zusammenstellte Schwankungen u. [illegible]
seit etwa 12 Jahren gemacht habe [illegible] hat sich für
die Aufstellung von Spielarten sich ergeben, oder besser
gesagt, woraus sich Spielarten anzeigen zeigten,
denn man hat sie nicht aufzustellen, sondern
sie in der Natur durch Beobachtung heraus zu suchen
oder es sind ganz Punkte aus solche, die zur Unter-
scheidung von Nymph. alba u. odorata wichtig sind.
~~Dieß nur schon von Nymph. odorata~~ Wenn ich oben
angab, daß die Größe der Blüthen u. Blätter nicht, so
werde ich nun, Spielarten begründet, zu ich [illegible]
bei den beiden Hauptspielarten der Nymphaea alba
I polystigma (ehemals melocarpa Casp.) u.
II oligostigma (ehemals oocarpa Casp. — ich
mußte diese Namen aufgeben, weil von oocarpa
sich auch eine Unterspielart mit abgeplatteten
Früchten bei Petersburg in Russland u. bei [illegible]
Brenson fand —) die Größe der Samen ein
sehr beständiger Unterschied; I polystigma mit
geschwollenen Eizellen, hat kleine Samen u. II oli-
gostigma, mit wenigen Eizellen, sehr große. Dazu
[illegible] sich in [illegible] [illegible]
nehmen. Und die Größe des Pollens variirt

GEORGE ENGELMANN PAPERS
MISSOURI BOTANICAL GARDEN

0 1 2 3 4 5 6 7 8 9 10 cm
copyright reserved
Missouri Botanical Garden

auch in gewisser bestimmter Weise bei Nymphaea tetragona Georgi 1775 (= N. pygmaea Ait. 1811). [7]

Sind nun bei ~~für~~ ~~d.~~ Nymph. odorata schon vorgeschlagene Spielarten unterschied berechtigt? Kaum! aber nur sehr gewissenhaft. Schon Pursh charakterisirt seine var. rosea nicht allein nach der Farbe, sondern auch nach der Blattgestalt. Bei Nymph. odorata l. heisst es: „N. foliis orbiculato-cordatis, integerrimis, lobis divaricatis, acumine obtuso, bei var. β. rosea: „foliis cordatis, obtusis, lobis divaricatis, acutis." Dieser Unterschied scheint nur in Wirklichkeit zu bestehen, u. zwar nicht nach Analogie von Nymph. alba, wo die gleichen Unterschied der Formen der Blätter auf [illegible] ~~[illegible]~~ sich finden u. [illegible] nach dem mir [illegible] ~~[illegible]~~ [illegible] gesehenen Material der N. odorata. Die Hauptform u. var. β sollen nach Pursh Blätter lobis divaricatis haben. Das ist nicht sehr der Fall. Lappen sehr [illegible], u. zwar [illegible] bei der Hauptform, als var. β. Bei der Hauptform soll die Blatt integerrimum sein, bei var. β obtusum, ~~[illegible]~~ findet es sich bei var. β emarginatum u. [illegible] der Hauptform [illegible] u. [illegible] bei den apice subacuminatum u. anderen [illegible], wie z. B. Sims l. c. t. 1652 u. ~~[illegible]~~ ~~[illegible]~~ von var. β dargestellt. Die [illegible] Lappen bei 1 [illegible]: acumen obtusum, bei var. β aber acuti sein; ich finde bei beiden ~~[illegible]~~ [illegible] (1 u. var. β) die Blatt [illegible] lobis plus minus acuminatis [illegible] die Blattlappen bald acumine acuto (auch bei der Hauptform, wie Sims Bot. Mag. t. 819 der β. dargestellt) (subobtusato) u. in anderen Fällen acumine obtuso. [illegible] der Unterschied von 1. foliis orbiculato-cordatis u. var. β. f. cordatis ist nicht verständlich. Ich finde in der Hauptgestalt der Blätter von 1 u. var. β im Ganzen keinen Unterschied. Torrey u. Gray l. c. unterscheiden 3 Spielarten, von denen sie die beiden ersten charakterisiren: α sinus and lobes.

of the leaf more or less acute; β sinus and lobes more or less rounded". In der letzteren [illegible] wird, N. reniformis Walter Car. p. 155 citirt, die nach dem Vorgange von DeCandolle in Deless. Icon. II t. 5 als Synonym mit Nym. reniformis DeCandolle l. c. aufgeführt wird. Auch wird: Nelumbium reniforme W. sp. II 1260 als Synonym citirt. Willdenow hat Nelumb. reniforme ~~auf~~ auf Walter's Autorität ~~begründet~~ nicht dessen Nymphaea reniformis begründet u. Willd. hat vollkommen Recht Walter's Nymphaea reniformis für ein Nelumbium zu halten, da Walter sagt ausdrücklich hinzu: „Corolla monopetala"; was nur auf Nelumbium paßt. ~~[illegible]~~ DeCandolle u. seine Nachfolger haben diese Nymph. Nymphaea reniformis DC l. c. mit Nymph. reniformis Walter zu identificiren. Was aber DeCandolle's Nymphaea reniformis in Deless. Icon. anbetrifft, ~~so~~ u. diese Pflanze [illegible] Torrey u. Gray, sie erwähnt? das Original im Herbarium Delessert in Paris nicht mehr. Nach Planchon (Ann. sc. nat. 3 Ser. XIX. 1853. p. 52) [illegible] ich im Jahr 1856 habe es gesehen; obgleich zwar Lasègue mit großer Freundlichkeit mir alle Nymphaeaceen, die da waren, zur Untersuchung [illegible]. Das Original ist wahrscheinlich durch Würmer verzehrt, da ein [illegible] Deless. [illegible] ~~[illegible]~~ sie vernichtet. Was aber die Abbildung der Blätter der Nymph. reniformis DC. anbetrifft, so würde ich nicht glauben, daß ~~[illegible]~~ sie in Betreff der so völlig abgerundeten Lappen richtig ist, als bis ich ein Blatt der Art gesehen hätte. Unter den Hunderten von Blättern, die ich untersucht habe, ist keins, das solche völlig abgerundete Lappen hat. ~~[illegible]~~ Die Phantasie ~~[illegible]~~ des Botanik unkundigen Künstlers mag auch einen durch schlechte Trocknung entstellten ~~[illegible]~~ [illegible] gestalteten Blatt, nicht ~~[illegible]~~ [illegible] mit abgerundeten Lappen ~~[illegible]~~ [illegible] auf DeCandolle's [illegible] [illegible] geschlossen haben. Ist ja die Phantasie der Künstler oft ein [illegible] von ~~[illegible]~~ Irrthümern.

MISSOURI BOTANICAL GARDEN
ENGELMANN PAPERS

0 1 2 3 4 5 6 7 8 9 10 cm
copyright reserved
MISSOURI BOTANICAL GARDEN

Nymph. alba haben ~~sehr~~ zahlreiche Unter-
abänderungen, unterschieden hauptsächlich durch die
Frucht, sphaerocarpa (kugelfrüchtig), depressa
(~~[illegible]~~ mit glatter Frucht), urceolata (mit sehr
kurzer krugmündiger Spitze) u. s. w. Nym-
phaea tetragona Georgi zerfällt in 2 Hauptformen
I lata mit sehr breiten ~~[illegible]~~, gekrümmt-
spitz zugerundeten Außenkelchblättern, breiten, kurzen
Kelchblättern, im Norden u. Osten des Gebietes, ganz
ganz der Nymph. alba oligostigma entsprechend;

die in ~~[illegible]~~ Ostsibirien, Kamtschatka u. der Mand-
schurei

u. II angusta mit ~~sehr~~ spitzen, gekrümmt zu-
zugespitzten Außenkelchblättern u. langen, spitzen
Kelch u. Blumenblättern, im Süden (Khasia-Mon-
tains in Silhet) u. Südosten des Gebietes (China,
Japan). Es ist nun zuzusehen, ob nicht auch
in Nordamerika solche geographisch abgegrenzte
Abänderungen, dieser Art entsprechen u. zugleich völlig
[illegible], auch in Kultur sich gleichbleibende, ~~[illegible]~~
~~[illegible]~~. Dann der Nymph. alba u. tetragona ent-
sprechende, von N. odorata ~~[illegible]~~ vorkommen
den Nymphaea Lotus giebt es auch solche morphologisch
verschiedene geographische Varietäten, jedoch weiß ich
darüber nichts weiter anzuführen und nicht zu vermuthen
zu stehen.

Früchte habe ich von N. odorata sehr wenige, nur einige in
Borsig's Garten in Berlin gezogen u. einige unreife
aus dem Vaterland, die Herr Eaton mir schickte, gesehen ohne
näheren Angabe der Fundort. ~~[illegible]~~ Alle waren kugelig. Von
unbefruchteten und reifen Früchten, bei denen Samen der
Arillus völlig entwickelt ist u. deren Samen sporangium
~~[illegible]~~ nicht [illegible], sind, da die letzteren Früchte
sind noch ein [illegible].

Die Nymphaea alba von ~~[illegible]~~ (~~Nuttall~~ Nuttall,
~~Michaux~~ Nuttall (Gener. N. A. plants 1818 II p. 13)
– „around Detroit" –, Michaux (Fl. b. am. I

310) — "a Canada ad Carolinam" — (im h. Michaux'schen ~~[struck]~~ im h. Mus. Par. steckt die N. odorata aus Canada's von Michaux als N. alba bezeichnet) — als in Nordamerika vorkommend angegeben wird, obgleich ~~der~~ dieß nur Jedesfalls ~~[struck]~~ ~~Paynes N. tuberosa aufgestellt zu haben scheint~~, zu sein scheint in einer Verwechselung mit N. tuberosa ~~[struck]~~ Paine zu beruhen, da aber doch nicht ganz unmöglich wäre, daß namentlich im Nordwesten Nymphaea alba vorkäme, so gebe ich die Unterschiede beider Pflanzen ~~[struck]~~ der N. alba u. odorata hier so weit sie mir bekannt sind.

Nymphaea alba L.

1) Grana pollinis aculeata vel grosse tuberculata, operculo laevi vel sublaevi.

2) Processus carpellorum carnosi, triangulari-ovati vel oblongo-triangulari-ovati, interne plerumque subconcavi, 1–5 sulcati.

3) Stipulae oblongo-ovatae, elongato-triangulares, anguste emarginatae, obtuse bicarinatae (usque ad 3 3/4''' longae), punctum vegetationis rhizomatis longe superantes, cum petiolo putredine proxime ad punctum vegetationis rhizomatis destruitur.

4) Pulvinaria foliorum in rhizomate valde prominentia.

5) Folia in rhizomate densissime posita, internodia brevissima, vix 1''' longa.

Nymphaea odorata Ait.

1) Grana pollinis ubique aculeata.

2) Processus carpellorum carnosi oblongo-triangulares vel lanceolati, sublineares, interne canaliculati.

3) Stipulae subreniformes, late emarginatae vel ovato-reniformes, obtusiusculae, oblique utrinque decurrentes, obsolete bicarinatae (usque ad 9''' longae), inferiores longe sub puncto vegetationis rhizomatis relictae, petiolo superstites, (summae) punctum vegetationis rhizomatis vix superantes.

4) Pulvinaria foliorum in rhizomate vix prominentia.

5) Folia in rhizomate remotiores, internodiis longioribus 1 1/2''' circiter longa.

N. alba	N. odorata
6) Rhizoma crassius, usque ad 4 1/4"	6) Rhizoma tenuius, usque ad 1 1/2" crassum.

Am besten sind die Narben der Blattstiele [illegible] angegeben bei Nymph. tuberosa ~~Hayne~~ Paine (Report of the Regents of the University of the State of New-York 1865 Sonderabdruck p. 132) sind die ~~[illegible]~~ Blattnarben auf den Knollen, die ich allein ~~[illegible]~~ [illegible] von dieser übertragenen Pflanze sah, ~~[illegible]~~ transverse-lanceolatae (s. cicatrices) ancipites [illegible] Nuphar. Das Rhizom von Nymphaea alba ist leider nirgend brauchbar dargestellt. Hayne (Arznei-Gewächse IV t. 35) bildet nur [illegible] das von Nuphar luteum statt dessen von Nymphaea alba ab, ebenso Reichenbach (Icon. Fl. germ. VII t. 70, nur Copie von Hayne) u. Dietrich (Fl. boruss. 11 t. 765).

Ich vermisse eine Abbildung der Stipulae von Nym. alba u. odorata. [illegible] bei Nym. alba [illegible] Stipulae (nicht [illegible]) [illegible] zu haben. Die [illegible] bot. Garten von N. odorata sind [illegible] gerundet, [illegible] wie es scheint, die ± des Rhizomes, die mir Eaton in N. Am. schickte, sind nicht [illegible] gerundet, sondern spitzlich oder [illegible], wie [illegible] ~~[illegible]~~ [illegible] N. odorata [illegible] Stipulae.

Paine giebt von seiner N. tuberosa an: „connectivo staminum exteriorum supra antheram in cuspidem elongato". Dies [illegible], daß dies auch bei N. odorata bei St. Louis [illegible] und ich kann dies ~~[illegible]~~ ~~[illegible]~~ N. odorata aller Standorte, von denen ich [illegible], von Canada bis Florida, Texas u. Guiana bestätigen. Die äußeren u. mittleren Stamina aller [illegible] haben antheras appendiculatas, wie der Ausdruck [illegible]

ist, der Appendix hat latitud. : longitud. = 1 : 1/4 – 1 1/2.
Ich habe leider von Paine's N. tuberosa ~~Knospe Knolle~~ Blüthen noch nicht gesehen. Es ist nöthig, dass das Verhältniss der Breite zur Länge des Kelchblatts auch für N. tuberosa angegeben wird.

Die Haare mit denen die Spitze der Knollen von N. tuberosa Paine bedeckt ist, sind sehr auffallend. Sie sind theils wie die anderer Nymphaeaceen, in dem sehr viele Zellen [illegible] liegen
b 4 bis 11 u mehr, :a u andere mit dicken
a Haare :b, deren Grund [illegible] bis 3 Zellen in der Breite zeigt. Solche Haare sind mir bei den Nymphaeaceen sonst nicht bekannt.

Es giebt noch einige Namen von amerikanischen Nymphaea-Arten, die wenig oder gar nicht bekannt sind u entweder zur N. odorata zu rechnen sind ~~gehören~~, oder ~~[illegible]~~ zu ihr u. N. tuberosa vielleicht gehören dürften. Es sind diess Nymph. nitida Sims (Bot. Mag. XXXIII t. 1359), N. rosea Rafinesque (Med. Fl. 1830. II 45), N. maculata Rafin. (l. c.) N. spiralis Raf. (l. c.), N. parkeriana Lehmann (in Otto Hamburger Gart.- u. Blumenzeitg 1850. IX p 529)

MISSOURI BOTANICAL GARDEN
GEORGE ENGELMANN PAPERS

Nymph. parkeriana Lehm., von einem gewissen Mr. Parker in Guiana gesammelt, — Originale hiezu ist im h. Hooker u in h. Lehmann, ~~die [illegible] in [illegible]~~ Dieser Nymphaeaceen ist nach Lehmann's Zeit entwischt — ist nichts anderes, als eine kleine Form von Nym. odorata, deren Blattstiele oben zum Theil [illegible], obgleich sehr wenig behaart sind.

Obgleich Nymphaea nitida Sims abgebildet ist, so in Europa nicht kultivirt wurde, herrscht doch nun jetzt Dunkel über diese Pflanze, weil kein Original zu erlangen ist. Ich habe umsonst im herb. Hook., herb. Mus. Britt., h. Linn. Soc. London, [illegible] sonst in fremden Herbarien ein Original gesucht.

Zu H. Bernhardi, der dir entkräften, wenn ich nicht irre, ~~ich sah~~ ~~[illegible]~~ ... ~~[illegible]~~
eine Knospe u. 1 Blatt ohne Zweifel von kultivierter
kleiner N. odorata, welche als N. pygmaea bestimmt,
durch ein Lieutenant mit Blattstiel als N. nitida be-
zeichnet. Im botan. Garten zu Genf (als N. nitida) fand ich eine
kleine Form von Nymph. odorata deren Zweig kultivierte
deren Blätter so dicht sich ich [illegible], weiß grün unten, fast
war – jedoch auch doch älterer Stock ~~Pflanze~~, gegen den Rand etwas
bräunlich waren. Sims giebt ~~für seine~~ 3 Charaktere
als seiner N. nitida eigenthümlich an: 1) the rootstock
is perpendicular and does not seem ~~to~~ ever to acquire
any considerable length. Die Abbildung des Rhizoms
muss sehr mangelhaft, unterscheidet sich aber nicht von
einer kümmerlichen, im Zweig gezogenen N. odorata
nach dem ein [illegible] [illegible] sollte. Das Rhizom
ist bloß 2 1/2" lang [illegible] u. jedenfalls einer ~~[illegible]~~ nur wenige
Jahre alten Pflanze angehörig. Es [illegible] sich von ihm ~~[illegible]~~
~~[illegible]~~ [illegible] die Eigenschaften des Rhizoms [illegible]
[illegible], [illegible] nicht annehmen, denn die Rhizome junger
Pflanzen [illegible] u. sehr [illegible] [illegible], z. B. dieser
[illegible] sind bei ~~[illegible]~~ der [illegible] N. alba in der Jugend
[illegible] [illegible] 1 1/2' lang sind, [illegible] mindestens 10 Jahre
[illegible] [illegible] [illegible]. Um die Angabe über das [illegible]
[illegible] Rhizom zu begründen, hätte Sims ~~die Pflanze~~ in seinem Garten
[illegible] im Zweig [illegible] ~~[illegible]~~ [illegible] Bedingungen [illegible], [illegible]
[illegible]. 2) „Veins (of the) strongly, [illegible] exarata". Sieht der
Willdenow (Hort. Berol. [illegible] XXXIX) von N. odorata, die
er in Berlin lebend [illegible], sagt: „venis ~~[illegible]~~ in precoris".
[illegible] Sims (Bot. Mag. t. 1652) (mit Pursh) daß Willdenow ~~[illegible]~~
nicht N. odorata, sondern N. nitida ~~abgebildet~~ [illegible] sich [illegible]
[illegible], [illegible] N. odorata von Aiton (Hort. Kew. ed. 2. III 292)
Bigelow (Am. med. bot. III 137), Torrey (Fl. New York 38)
„prominent veins" zugeschrieben werden. [illegible] (der N. odorata) früher
bemerkte ich, daß ~~[illegible]~~ die Nerven der [illegible] Blätter bald
~~[illegible]~~ erhaben, bald [illegible] sind. Ich [illegible] [illegible] [illegible] ~~[illegible]~~
N. odorata im Zweig im berliner botan. Garten, [illegible] [illegible]
[illegible] über der Blattfläche erhaben oder kaum [illegible] in
[illegible] [illegible]. Nach Analogie anderer Arten [illegible]
~~[illegible]~~ die Nerven bald erhaben bald [illegible] in
[illegible] [illegible] sein u. [illegible] [illegible] [illegible] Merkmal
[illegible]: Ich [illegible] als [illegible] zu [illegible] [illegible]

Nymphaea blanda Meyer an. Die Sibirischen sehr niedrigen Stücke ~~[illegible]~~ hatte, ich hatte die letzten Sommer etwa 10 im Topf, haben nie geblüht [illegible], [illegible] die [illegible] ~~[illegible]~~ Pflanzen, die ~~[illegible]~~ in den [illegible] gestanden u. aufgezogen [illegible] war, u. [illegible] sehr üppige Pflanzen mit zum Theil [illegible] Blättern [illegible], [illegible], [illegible] wenn die Pflanze klein war, [illegible]. [illegible] die [illegible] [illegible] [illegible] [illegible] Sims giebt an: „N. nitida seems to require the constant heat of a stove or hot-bed ~~[illegible]~~ to preserve it alive, whilst odorata is now found to be quite hardy." [illegible] „seems" [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]. — Ich [illegible] [illegible] Sims's Beschreibung [illegible] [illegible] N. nitida von N. odorata unterscheidet. Die Abbildung allein zeigt [illegible], was ich [illegible] an N. odorata bemerkt [illegible] Sims [illegible] [illegible], [illegible] [illegible] [illegible] [illegible]. [illegible] [illegible] N. odorata [illegible] [illegible] [illegible] [illegible] [illegible] zu [illegible] — Sims [illegible] [illegible] von N. nitida [illegible]. Ich [illegible], [illegible] [illegible] [illegible] [illegible]. Don giebt an: „Natives of Siberia in lakes and in the river Lena and in Dauria in still water" (Generis Syst. I 1831. p. 126). [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] mit N. tetragona Georgi, [illegible] [illegible] [illegible] aus Sibirien [illegible].

[illegible] [illegible] 2 Arten, die Rafinesque macht, [illegible] ich gar nicht. Hat Rafinesque ein Herbarium [illegible] [illegible]? ~~[illegible]~~ Sind Originale nicht [illegible] [illegible]? Ich kann bloss seine ~~Diagnosen~~ [illegible] Diagnosen abschreiben:

1. Nymphaea rosea. Leaves orbicular, split at the base, lobes divaricate, acute, lower surface red, petals rose coloured. In New York, Ohio etc with smaller flowers, less odorous.

2. Nymphaea maculata. Leaves orbiculate, subundulate, dentate, base cordate lobes obtuse, a brown central spot on the leaves, petals white. In Canada and New York near Lake Ontario. Flowers nearly inodorous

0 1 2 3 4 5 6 7 8 9 10
cm copyright reserved
MISSOURI BOTANICAL GARDEN

rous, smaller, with many narrow oblong obtuse petals.

9 Nymphaea spiralis Raf. (N. alba Mx. and N. odorata Ell.). Leaves orbicular, emarginate, base split, colorate, lobes divaricate, obtuse; petioles and scapes spiral; calix four-leaved, equal to the corolla. In the southern States. Flowers white, small strong.

N. spiralis scheint wegen des Geruchs zu odorata, N. maculata u. vielleicht auch rosea wegen [illegible] gefärbten Geruchs zu N. maculata wegen der [illegible] Lake Ontario zu N. tuberosa Paine zu gehören. — R.

[illegible]

R. Caspary.

[illegible]

Rec.. March 7

Konigsberg in Prussia
Feb. 10,1866

Dear Friend !

Your letter of January 6, '66 I received in due time,and you did without doubt get mine of December 22,1865 with the Juncus species, which you desired to get aquainted with more accurate - ly from Meyer's herbarium.- I wrote you then, that Nymphaea odorata with shaggy hairyness of the leaf-stem, is unknown to me. That is incorrect. I recently described for Miquel's Ann. Ingr. Bot. the Nymphaea odorata according to the herb.Engr. Bot. and looked at that occasion through all my notes, and find, that I examined on April 10,1856 in the Berlin Botanical Garden on living specimens the hair at that time;they go under the names N.versicolor, discolor,pygmaea, but all is N.odorata,being more or less colored on the under side of the leaf vermilion (??? E.D.) and, more or less with from 2 - 10 celled,cylindrical hair upon the leaf-stem. I also saw in the same year in herb.J.Gay (could be Say, E.D.) leaves with long-haired stems, and from the specimens of the Nymphaea odorata ,which I have here from most of the europaean herbaria,I find several (h.Ingr.Bot - Ch. Wright & Tiens - h.sondexSchlottmann.Tra.. h. minor Louis;ann Ded. A.Gray,etc.) with partly highly shaggy stems -disposition for hair as round cells between long ones in every stem of Nymphaea odorata but mostly they develop little or hardly in fresh youth and disappear later. I examined now in Miquel's Ann.Engr.Bot. 2 forms of N. odorata I) glabrapetiolo folio adulti glabro and II)villosa,petiolofolii plus minus in partesuperiori villoso. Through lesser,thinner pubescense to disappearance of hair,the latter transcends into the first. In Wilderer's herb. & in h.Berlin. are leaves,which show on top hardly any hair on the stem. One must be on guard to not mistake algae for hair. As proof one makes several cuts of the epider-

0 1 2 3 4 5 6 7 8 9 10
cm
copyright reserved
MISSOURI BOTANICAL GARDEN

mis of the leaf, treating them with iodine(solution of iodine-potassium with water)) and then with concentrated sulphuric acid. If real hair are present, their cuticulum remains connected with the epidermis, if there are deceptive algae, they will be destroyed, and only epidermis remains with round receptacles for hair.. In dried state algae and hair can not be distinguished with certainty without this application. I find those shaggy leaf parts not only with small plants but also with large ones and those, which have finished flowering.. The leaf collected by Schlottmann in Texas is 6½" long to the tip and the flowers of those of Mr.. Morei (? E.D.) from Louisiana 4" 3½ '''' in diameter, and that in dried form !The lower part of the leaf is deeply carmin, partially pale, totally pale along the rim, yellowish-green overall, possibly once in fresh condition light carmin along the rim.. The rips are very different for the two forms in dried state, their number 7 - 12 on either side, at times the primary, even the secondary and tertiary rise above the leaf surface and spread out much, - then the leaf was apparently pressed with very little pressure, which is shown also through other wrinkles and distortions - but they lie with the leaf surface in one plane, and are then in part not canaliculate in the middle, or, once in a while, canaliculate in the middle.. The median rib is besides mostly somewhat raised, and this condition of the ribs extends to all forms of the plant, which I have in front of me, and my material is very impressive.. But despite the volume and the effort, I urge you with the request, to continue to make thorough investigations about N. odorata varieties. The dried material, only pulled-off flowers and leaves, and only a few of each species, is entirely insufficient, to teach me about the species and subspecies. Those, which have been set up by now, I too consider not admissible and without foundation.

0 1 2 3 4 5 6 7 8 9 10
cm
copyright reserved
Missouri Botanical Garden

Varieties are based on I) Color. Pursch (Fl. Am.sept. 1824 II 368) created a variety β rosea; foliis cordatis integerrimis, obtusis divaricatis; acutis, petiolis pedunculis folioque subtus purpureis,, calycibus petalioque .

"The variety β is probably a distinct species,which only further observation can decide ! About the shape of the leaf, which Pursch also mentions as character of the variety, later. Now only about the color. Was this in Pursch's β rosea constant ? No ! Purschbrought his plants himself to England, where they were cultivated,and were not any more rosy-colored white, as Sim's (could be Kim's,E.D.) (Bot. Mag. L. t. 1652) reports. He, thus,removes himself from the color as character,and takes a poorer one,the size, as his refuge,and calls Pursch's plant a var. β minor. As to the coloration of the leaf. based on the existing dried material and also the cultivated,young plants,it varies from light Keranistin (a red color ? E.D.) to a dense yellow-green,which does not even at the rim show a trace of Keranistin,which can be seen: Even the colore of the leaf is too variable a mark for basing varieties on it. At best, where the coloration is quite striking,, a sub - or sub-sub-variety could be based on it. The β minor Sim's is being mentioned as synonym by the author himself: N. odorata γ smaller Thor. and Gray Fl. N.A. 1838 -40 p. 57 and N. odorata var ζ smaller Z.Torrey Fl.Newyork 1840 p. 38, though in contradiction with Sims; who'se plant is being described as white-flowering m, that γ smaller Thorey and Gray and var. ζ smaller Torrey have "flowers rosecolored". King (? E.D.) odorata 2 Rubella Rafinesquii Medic.Fl. 1830 II 40 "tinged with rose" is thus based only on color,an untenable variety, as also herewith 3. Chlorhiza "with yellow roots" i.e. rhizomas,which in normal plants are "blackish"according to Rafinesque ! Nymphaea alba has blackish and also

0 1 2 3 4 5 6 7 8 9 10 cm copyright reserved Missouri Botanical Garden

yellow rhizomes, which, however, does not indicate different varieties, but only different age and different earth compositions, which do not destroy or dissolve but blacken the rhizomes.

What 2) determines the size of the entire plant, the inflorescense, and leaves as a variety, which Sims uses in species β minor and Rafinesque (l.c.) in his λ parriflora, I consider this character even more variable (inconstant, E.D.) than the color. Every grower of Nymphaceae knows that the size, the strength and charm of his plants, their flowers and leaves depends entirely on the circumstances under which he grows them. If one wants small plamts with small leaves and flowers, and which flower sparingly, then one puts the seedlings in small pots in poor soil; even rich soil makes them only a little larger. If I want medium-large plants, I plant them in good or best soil in medium-size or large pots. If I want outstanding, large plants with large flowers, I put the seedlings of the same fruit, which furnished the small plants with small flowers in small pots, into the open soil or very large containers, to be cared for the best way and also with manure. Truelings (a word Caspary invented, E.D.), i.e. plants, which have self-seeded in large containers and good soil, reach the most significant size of all, as they grew under opportune conditions. As in artificial culture so in Nature. Poor soil, little nurishment makes small plants - and as the soil in entire land areas is often the same, one has as long as it remains poor and the same small plants, often in entire districts. But do they remain so, if one gives them better conditions, very rich, good soil? Definitely not. I have seen, that miserable plants of Nymphaea alba and Nuphar luteum - v. Leonardi once sent me very few specimens from Bohemia, which he thought to be Nuphar pumilum - became large and strong in good soil, really extraordinarly large, and one had the old var. minor and maxima on the same stock, the best proof, that there were no varieties.

0 1 2 3 4 5 6 7 8 9 10 cm
copyright reserved
Missouri Botanical Garden

If, however, it could be proven, that a planta nana or minor remains white under the best conditions of nutrition, of that the seed is true, then, such a variety makes more sense, but cannot lead to proof for N. odorata var. minor, Sims. For foundation of a variety I find morphological differences better than color and specially size, the form of the tubular flower, if short or long, the stamina, if they have broad or narrow filaments, the pupillistic (pupillus, Latin = minor or orphan = reduced ? E.D.) stigmatic rays. the appendices of the carpels, their relation of length to width, if and how they are furrowed or hollowed, the shape of the fruit, if ball-shaped, uniform, smoothly pressed, the form of stipules, their size in relation to the leaf, the status of pollen, if warty or spiny. I mentioned here those morphological points, which apply to Nymphaea alba, which I have examined from all countries of Europe either living or in alcohol, and in their cause I made numerous excursoins and trips for about 13 years, which proved important for the definition of varieties, or better said, when varieties showed themselves different, because we do not need to postulate them, but to find them in Nature through observation, or they are also such points, which are important in the differentiation of Nymphaea alba and odorata. When I stated, that the size of flower and leaves does not, as far as I know, justify a variety, it is thus with the two primary varieties of Nymphaea alba

I) polystigma (formerly melocarpa Carp) and
II) oligostigma (formerly ovcarpa Carp.)

I had to give up these names, because a subvariety of ovcarpa with flattened fruit was found at Seterwuhg in Russia and here in Prussia. The size of the seeds was a constant difference. I) polystigma with numerous carpels, has small seeds, and II) oligostigma with fewer carpels, very large ones. Of course, there are exceptions in rare cases. And the size of the pollen varies in a rather constant way with

0 1 2 3 4 5 6 7 8 9 10 cm
copyright reserved
Missouri Botanical Garden

Nymphaea tetragona Georgi 1775 (= pygmaea Sis. 1811).

Are now any ~~xxxxxxxxxxx~~ morphological varieties known of Nymphaea odorata ?? Hardly! But only very doubtful. Already Pursch characterizes his var. rosea not only by color but also by leaf-form. For Nymphaea odorata I he says: N. folio orbiculato-cordatis - submarginalis lobio divericatis, acuminibus obtuso, for var. β rosea: foliis cordatis -, obtusio, lobio divericatis, acutis. These differences seem to me to shatter into nothing, and that once according to analogy of Nymphaea alba, where the same difference of the form of the leaf is found on the same stem and change, according to the material available and proven by me. The main form was to have according to Pursch leaves lobis divericatis, which is not always the case. Quite frequently the lobes stretch very wide, and that as well for the main form as with var. β . With the main form the leaf is supposed to be subemarginatum, for var. β obtusum. I find it often with var. β emarginatum and for the main form obtusum, and, on top of it, for both apice subacuminatum. In other cases, as e.g. B. Sims l.c.t. 1652 presents for var. β the lobes of I are supposed to have acumen obtusum, for var. β however acuti; and are for both forms (I and var. β) the leaves lobis plus minus acuminatis, and for the leaves of both forms the leaf-lobes at times acuminae acuto (also for the main form, as Sims shows Bot.Mag. t. 819 3 times) and in other cases acuminae obtuso subobliterato. Finally, the difference between I. folio orbiculato cordatis and var. β fol. cordatis does not make sense. I do not find any difference in the main shape of the leaf of I and var. β. Varieties, of which you characterize the two first ones thus = α sinno and lobis of the leaf more or less rente (? E.D.) ~ β sinno and lobis more or less rounded ? To the latter form is cited N. reniformis Walter Car. p.155, which accor-

0 1 2 3 4 5 6 7 8 9 10 cm
copyright reserved
Missouri Botanical Garden

ding to proceedings of Decondell in Deless. Icon II t.5 is mentioned as synonym with Nym.uniformis Decondelle. Also cited is Nelumbium reniforme W. sp II 1260 as synonym. Willdmann based Nelumbo reniformis on Walter's authority according to his Nymphaea reniformis, and Willd. is entirely correct to consider Walter's Nymphaea reniformis as a Nelumbium, because Walter explicitly adds: "loculis monospermis", which fits only Nelumbium. Decandolle and his followers are therefor wrong to identify Nymphaea reniformis DC bc with Nymphaea reniformis Walter. As to Decandoll's Nymphaea uniformis in Deless. Lion concerns, and this plant my Torrey and Gray, the original does not exist any more in the herbarium Delessert in Paris. Neither Planchon (Ann. ? ? Ser. XIX 1853 p. 59) nor I have seen it in 1856, though Mr. Lasique brought together all the Nymphaeaceae, which were there, with great kindness and labour. The original has probably been eaten by worms, which worked much in the h. Deless. and destoyed it. As to the illustration of Nymphaea reniformis, I will not believe that it is correct concerning the grooved, rounded lobes until I have seen a leaf of the species. Of the hundreds of leaves, which I examined, is none that has ....., grooved, rounded lobes. The phantasy of a botanically unknowing artist ~~may~~ may have created from a poorly dried and deformed and improperly positioned leaf with acuminated lobes the one shown in Decondolle's drawing. The phantasy of an artist is often the cause of errors. Supposed, that such a leaf really existed once, it is to be considered as a monstrosity, on which no variety can be founded, and certainly, the same stem, which produced such a leaf, would also produce normal ones. In many leaves, in which I saw a strongly rounded sinus, this was never the work of Nature, but caused by disfiguration in pressing; But, there exist broad, rounded sinuses, but if constant with certain plants ? That may be decided by american observers in situ.

The american botanists may decide in place, what varieties, diffe-

0 1 2 3 4 5 6 7 8 9 10 cm
copyright reserved
Missouri Botanical Garden

rentiated by morphological marks, exist for Nymphaea odorata. I also would like to recommend to you to prove the admissibility of I glabra and II villosa, which are based on differences, which may change often. I take the liberty to provide some viewpoints in establishing the varieties and, also, the analogy of the other species, better known to me, of the division Cartana DI, the Nymphaea alba L. and tetragona Georgi. Of both exist two geographically separated main forms; of alba I polystigma, westerly and southerly in distribution areas with long, narrow calyx-leaves, flowers and stamens, viable pollen, small seeds, yellow, single-tipped papillose rays, and numerous cancettes (the German word is Kanzetten ? E.D.), and II oligostigma (the word is blotted out by a stamp. E.D.), northern and eastern distribution territories, and in the mountains in the southern part, with broad, short calyx leaves, flowers - and stamens, warty pollen, large seeds, (one word covered by a stamp, E.D.) three-pointed, papillistic rays and few Capcettes. The two principal forms of Nymphaea alba have numerous sub-varieties, differentiated principally through the fruit, sphaeriorna (carrying hills) depressa (with smooth fruit) uncilata (with a very deep stygmatic disk) etc. Nymphaea tetragona Georgi shows also two principal forms. I) lata, with very broad, dried cylindrical Cross-stem-section(this is a guess, I cannot decipher a word. E.D.) broad, short calyx leaves, in the north and East of the territory, i.e. in East-Sibiria, Kamtchatka, and Manchuria, entirely correspon - ding the Nymphaea alba oligostigma. II) angusta, with small dried quadratic Cross- stem-sections (same word as note above, E.D.), and long slender calyx and floral leaves, in the South (Khasia Mountains in ??....) (NOTE: the Khasi Hills are in Assam, E.D.), and southeast of the territory(China and Japan). It is now to be seen, if there are not in North America such geographically limited varieties of N. odorata of these most natural and totally constant, remaining so in culture, corresponding

0 1 2 3 4 5 6 7 8 9 10 cm
copyright reserved
Missouri Botanical Garden

Of Nymphaea Lotus there are also such morphologically different geographical varieties; however, I do not want to expose further about this, in order not to be too wide- ranging.

Fruits I saw very few on N. odorata, only a few grown in Borsig's Garden in Berlin and some in wine spirits, which Mr. Eaton sent to me, though without closer statement of the place, where found. All were ball-shaped. One examines only ripe fruit, of who'se seed the arillus is fully developed, and who'se seeds are black-grey and not carmin, because the latter color is not ripe.

The Nymphaea alba of Nuttall (Gener. N.A. plants 1818 II p.73 " around Detroit" -, Micheni (Fl.b.Am. I NO) - "Canada ad Carolinam" - (in h. Michaux in h. Mus. Par. I saw N. odorata from "Canada" designated by Michener as N. alba) - is mentioned as present in North America, though this seems to be an error based on a mix-up with N. tuberosa Paine, but it may not be impossible, that Nymphaea alba exists in North America, therefor I give the differences of the plants N. alba and odorata as far as they are known to me.

NYMPHAEA ALBA L.	NYMPHAEA ODORATA Ait.
1) Grana pollinis aculenta vel grosse tuberculata, operculo laevi vel sublaevi.	1) Grana pollinis ubique aculeata.
2) Processus carpellorum carnosi triangulari - ovati vel oblongo-triangulari-ovati, interne plerumque subconcavi, 1-5 sulcati	2) Procissus carpellorum carnosi oblongo- triangularis vel lanceolati, sublinearis, interne canaliculati.
3) Stipulas oblongo-ovatas, elongato- triangulares, anguste emarginatas, obtuse bicarinatae, ... ad 3 3/4" longae punctum vegetationis. rhizomatis supernatis cum	3) Stipulae subreniformes, late emarginatae vel ovato-reniformes, obtusi ..... oblique utrinque decurrentes, obsolate bicariantae usque ad 9 m longae, inferiores longe sub puncto vegetationis -rhizomatis relicter petiolo superstites

0 1 2 3 4 5 6 7 8 9 10 cm copyright reserved Missouri Botanical Garden

Nymphaea alba (cont'd)

petiolo putredine proxime ad punctum vegtationis rhizomatis destructae.

4) Pulvinaria foliorum in rhizomati vulva prominentia.

5)Folia in rhizomati Insissitu(?) .....internodia brevissima 1''' longa

6) Rhizoma crassius usque $4\frac{1}{4}$ "

Nymphaea odorata (cont'd)

.....punctum vegetationis rhizomatis vix superantis.

4)Pulvinaria foliorum in rhizomata vix prominentia.

5) Folia in rhizomate rariores, internodios longioribus $1\frac{1}{2}$" cerciter longa.

6) Rhizoma tenuis usque $1\frac{1}{2}$" crassus

With both of them the scars of the leaf stems are circle-round , for Nymphaea tuberosa Paine (Report of the regents of the University of the State of New York 1865, Sonder-abdruck (special reprint,E.D.) p.132) , the leaf-scars on the rhizomes,which I alone have studied so far for this interesting plant, they are transverse-lanceolatae (sc.circatricae) ancipites, and remind therewith somewhat od the lop-sided, two-edged of Nuphar. The rhizome of Nymphaea alba is unfortunately nowhere illustrated properly. Hayne (Arzney (medicine, E.D.).....IV t 35) only shows that of Nuphar luteum instead of Nymphaea alba, ditto Reichenbach (..... Fl. germ. VII t 70,probably a copy of Nayev): Dietrich (Fl. ..... 11 t 765).

You wish for an illustration of the stipules of Nymphaea alba & odorata. It is enclosed. I believe to have also found very pointed stipules of Nym.alba (not with an outer rim) (Caspary creates a word: ausgerandet.Rand= rim,margin,thus: with an outer margin.E.D.). Those of Horst Bossig of N. odorata have a broad outer rim without being damaged,and it seems, that the rhizomes,which Mr. Eaton sent from N.A. are not with a rim,but pointed or blunted depending. The specimens

0 1 2 3 4 5 6 7 8 9 10 cm copyright reserved MISSOURI BOTANICAL GARDEN

grown in our hothouses of N. odorata I saw with stipules with margine.

Paine says about his N.tuberosa :"connectivo stamine exteriorum supra antherae in cuspidem elongato". You write to me, that you find this also for N.odorata near St.Louis and I can confirm this of N. odorata of all localities, from which I saw them, from Canada to Florida, Texas and Guiana. The outer and middle stamina of all species have antherae appendiculatae; as the expression is, the appendix has latitude: Wegiter 1 : $\frac{1}{4}$ - $1\frac{1}{2}$. Unfortunately I have not yet seen flowers of Paine's N. tuberosa. It is necessary, that the relation of width to length of the appendix be noted also for N.tuberosa.

THERE IS A DRAWING ON PAGE 13 OF THE ORIGINAL

The hair, with which the rhizomes of N.tuberosa Paine are covered ... are most striking. They are in part like the other Nymphaceae, in which many cells lie behind each other, 4 - 6 and more = a, and others with thicker hair = b, the base of which shows several, up to 3 cells in width. Such hair are otherwise not known for the Nymphaceae.

There are several names of american Nymphaeae, which are little or not known at all, and are either to be reckoned with N.odorata, or may belong to her and N.tuberosa. These are Nymphaea nitida Sims (Bot.Mag. XXXIII t.1359); N. rosea Rafinesquei (Med.Fl. 1830 II 45); N.maculata Rafin. (h.c.); N.; N. spicata Raf. (h.c.); N.parkeriana Lehmann (in Otto Hamburger Garten und Legumenzeitung 1853 IX p.529) Nymphaea parkeriana Lehm. collected by a certain Mr.Parker in Guiana-. Originals I saw in h.Nooker and h.Lehmann, whose Nymphaceae I purchased after Lehmann's death, is nothing else but a small form of Nym. odorata, who'se leaf stems are on top partially hairy, though very little.

Though Nymphaea nitida Sims has been illustrated, and was much cultivated in Europe, there exists much obscurity about the plant, be -

0 1 2 3 4 5 6 7 8 9 10 cm copyright reserved MISSOURI BOTANICAL GARDEN

cause no original can be obtained. I have never seen an original, example neither in herb. North, herb. Univ. Britt., H. Linn. Soc., nor in any other herbarium. In Bernhardt, who purchased them, if I am not mistaken, is one flower and 1 leaf, without doubt from a cultivated, small N. odorata, mostly determined as N. pygmaea, corrected by pencil as N. pygmaea. In the Botanical Garden of Ghent I found a small form of Nymph. odorata as N. nitida, grown in a pot, of which I saw only leaves and stems, white-grey below, rarer - however on the old stock toward the border carmine. Sims gives 3 characters as specific for N. nitida: 1) the rootstock is perpendicular and does not seem ever acquire any considerable length; the illustration of the rhizome is very defective, but is not in anything different from the pityful N. odorata, grown in a pot, from which no judgement could be made. The rhizome is only 2½" long and belongs certainly to a plant of only a few years age. It can not be used to determine the characteristic, that the rhizome is perpendicular, because the rhizomes of young plants, specially in loose soil, e.g. deep mud, are for the related N. alba in the youth itself to 1½' long, which may take 10 years, are very frequently vertical and turn horizontal only later. In order to base the statement of a vertical rhizome, Sims should have grown the plant in open soil and not in a pot. 2) "Venis (folii) utrique exeratis". Mr. Wolldener (Hort. Beril. No. XXXIX) says of N. odorata, which he saw alive in Berlin "venis impressis". Sims believes, that (Bot. Mag. + 1652) Willderer did not have N. odorata but N. nitida in front of him, because N. odorata had been assigned "prominent veins" by Aitra (Hort Kew ed. 2 III 292; Bigelow (Am. med. bot. III 127); Torrey (Fl. New York 38). Already earlier I observed, that the veins of the dried leaf are at times raised, at times caniculata; I find this for N. odorata in pots in the Berlin botan. Garden to be present under fresh conditions

0 1 2 3 4 5 6 7 8 9 10 cm
copyright reserved
Missouri Botanical Garden

By analogy with other species, the nerves are sometimes raised, sometimes imbedded in fresh state, and therewith this characteristic dis - appears. I quote as example for this fluctuation Nymphaea blanda Negor, which cultivated very strong stock. I had last Summer about 19 in pots, which always had raised nerves. however the seed-started plants, which were anchored and sprouted in the basin, and from which oppulent plants with in part enormous leaves emerged, had sunk-in nerves, even when the plants were small. Only the middle-rib al - ways is raised. 3) Sims says "N. nitida seems to require the constant heat of a stove or hotbed, to preserve it alive, whilst odorata is now found to be quite hardy.". From the word "seems" derives, that this is only hypothesis, and it is not worth to talk about it further. - I thus do not find anything in Sim's description, what would differentiate N. nitida from N. odorata. The illustration alone shows something, which I find mentioned no place about N. odorata, and which Sims himself does not pronounce, that the calyx is whirled on the outside. There is in North America also N. odorata with on the outside whirled calyx leaves to be explored. - Sims does not know the home-land of N. nitida. He supposes, that it could be America. Don mentions: "native of Siberia in lakes and the River Lena and in Dauria in quite waters" (Lineus Syst. i 1801 p.126). This is obviously incorrect and is based on mix-up with N. tetragona Georgi, which does exist there, and of which I saw many from Siberia.

Of the 3 species, which Rafinesque makes, I know nothing. Did Rafinesque leave an herbarium, and where is it ? Are originals still on hand ? I only can copy his diagnosis:

1) Nymphaea rosea Leaves orbicular, split at the base, lobes divaricati, acuti, lower surface red, petals rose colored. In New York, Ohio etc with smaller flowers, less odorous.

0 1 2 3 4 5 6 7 8 9 10 cm copyright reserved Missouri Botanical Garden

2) Nymphaea maculata Leaves orbiculata, subundulate, dentate, base cordate, lobes obtuse, a brown central spot on the leaves, petals white. In Canada and New York near Lake Ontario. Flower nearly inodorous, smaller, with many narrow oblong, obtuse petals.

3) Nymphaea spiralis Raf. s. (synonym ? E.D.) N. alba Mx. & M. odorata Ethot.) Leaves orbicular, emarginate, base split, colorate, lobes divaricate, obtuse, petioles and scapes spiral, calyx free-leaved, equal to the corolla. In the southern States. Flower white, smell strong.

N. spiralis seems to belong to odorata on account of the smell, N. maculata and perhaps also rosea due to almost missing smell, and maculata due to the localty: Lake Ontario to N. tuberosa Paine.

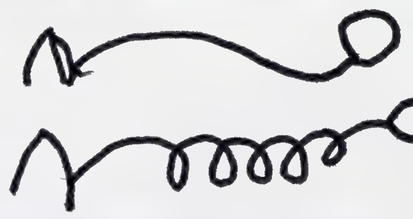
" Short characteristics of all Nuphar and Nymphaeae species not determined by us, would be very interesting " you write to me. Are you willing to consider the above as satisfying your wish concerning N. odorata? Of course, it is not short. But people, who want to search, must know, what they are looking for, and I want to ask you, if you consider it worthwhile, to translate this letter and to have it printed, possibly in the Transactions of the St. Louis Academy, to have 100 copies made at my expense, and to mail them to botanists and collectors all over America. I shall write a similar letter later about Nelumbium, Nuphar. I am now much too pressed through Miquel and v. Martins. But still another request with it, to add to the translation, namely, that whoever may have found something, which is a variety of N. odorata or any other american Nymphaceae, to send to me through the Smithonian dried and specially in alcohol specimens of rhizomes and fruit. To prove oneself is the principal item. I do not avoid costs.

I have sent $ 30.- (actually "Thaler" E.D.) to Mettenius, who is waiting for your disposition. - I enclose my photograph and ask for one of you of the same size; I have a larger one of you.

0 1 2 3 4 5 6 7 8 9 10 cm
copyright reserved
Missouri Botanical Garden

I ask very specially again for your vita (Apparently a history of Dr. E's life. E.D.). A shall beg for it as long until I get it. Best greetings to your wife and Georg. May God protect you ! With best greetings and hearty affection, Your

R. Caspary

ps. With Nymphaea alba the submerged stem of the fruit sometimes is simply bent backwards 
or rolled up screw-like
without reference to specific varieties.

(translated from German script by Edgar Denison, August 1988))

0 1 2 3 4 5 6 7 8 9 10
cm
copyright reserved
MISSOURI BOTANICAL GARDEN

Rec'd Jun 7th

Königsberg i. Pr.
6. 6. 68

Lieber Freund!

Herzlich willkommen in Europa! Ich hätte Ihnen [illegible] noch eher [illegible] zweimal [illegible] zu [illegible] hätte schon sollen, doch ich in letzter Zeit sehr angestrengt gewesen, jetzt blühende Nymphaeen untersuchen. Ich habe mir einen Ueberblick über die Zahl der Pollen zu bekommen von einigen 100 Pflanzen der [illegible] [illegible], [illegible] [illegible] gezählt, um die Procente der [illegible] [illegible] [illegible] zu können. Es ist mir der [illegible] [illegible] [illegible] [illegible] [illegible] Bestand der Nymphaeen sehr wichtig. Zuerst [illegible] ich in der [illegible] [illegible] neuen Bastard, der schon [illegible] [illegible] [illegible] [illegible] [illegible] Nuphar luteum–advena untersuchen. Dieser Bastard ist

cm 0 1 2 3 4 5 6 7 8 9 10
copyright reserved
MISSOURI BOTANICAL GARDEN

sein Gewerbe beschränken.
Ist denn nicht noch Aussicht da, um
Ihren ? Ihre Kleinen bei uns
unterzubringen; ich habe ein Zimmer
für Gäste, jedoch möchte ich
bis zum Anfang Juli kommen.
Mitte Juli gehe ich nach Lugg-
land wegen der Nichtkauf, die
ich auf der Durchreise durch Nürn
Franken nicht unterschätzen
kann u. dürfen haben trotz
aller Mühe nichts in den Kram
geschaffen haben, da ich bereits
der Meinung bin hat eine Gelegenheit
zur Rückkehr beabsichtigt. Können
Sie nun nicht in diesem Monat
hier her kommen? Ich habe
mich freundlich ... so, daß
ich Ihnen die Reise nicht beschäftigen
werden kann. Eine Reise
von 80 Meilen ist nicht wenig
zu ..., jedoch in 13 Stunden
sind Sie hier. Und im Wagen-
... können Sie bei uns
sehen, und Sie in der ganzen
Stadt nicht mehr halten. Die

0 1 2 3 4 5 6 7 8 9 10
cm
copyright reserved
MISSOURI BOTANICAL GARDEN

an Kummer sehr gut. dann
Zeit in diesen Blättern, gestern
von Myn. alte Sphaerocar-
pa [illegible] und Ihnen mit
etwa 30 Stück [illegible]
blühen sehen. Die Mutter ist
[illegible] sehr gut, [illegible]
[illegible] zu Hitze

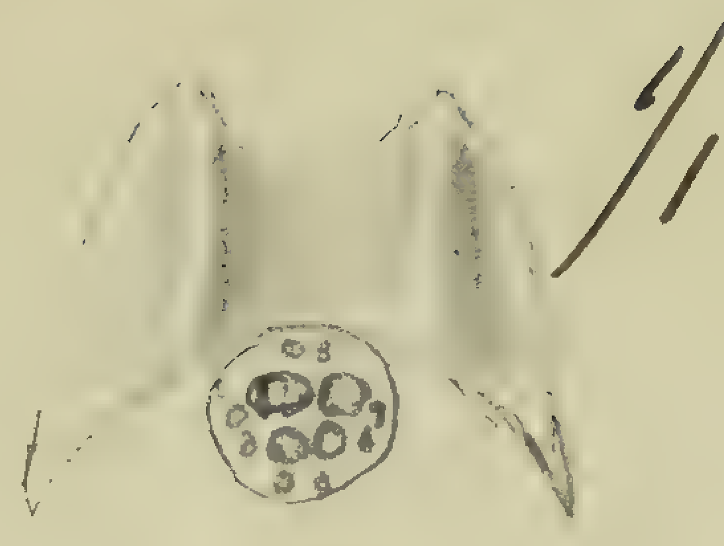
Für Ihre liebenswürdige
Aufnahme besten Dank.

Herzliche Grüße an Ihre
Frau Gemahlin und Ihren
George, [illegible]
[illegible] MISSOURI BOTANICAL GARDEN GEORGE ENGELMANN PAPERS [illegible]
[illegible]

Ich [illegible] die [illegible] [illegible] [illegible]
[illegible]. [illegible] England [illegible]
[illegible] [illegible] [illegible]
[illegible] [illegible] [illegible]
[illegible] [illegible], [illegible] [illegible]
[illegible] [illegible] England,
[illegible] [illegible] [illegible]
[illegible], [illegible] möglich. [illegible]
[illegible] [illegible] [illegible]
[illegible].

In [illegible] [illegible]
Ihr R. [illegible]

Fig 1 m. n.



m. n.
Fig 2

<u>Nymph. odorata</u>

Fig 1 u. 2 Stipulae.
Fig 1. Rhizom mir von Eaton aus N. Am. geschickt in Weingeist.

Fig 2 Rhizom das im hort. Borsig in Berlin in warmem [illegible], den Abdampfungswasser einer Dampfmaschine speiste u. darin bei + 24° R Wassertemperatur gezogen u. sehr üppig u. kräftig war, dicker als die Rhizome N. Amer.'s von Eaton.

<u>Nymph. alba L.</u>

Fig 3 Stipulae eines Rhizoms aus dem Laacher See bei Andernach. (Var. depressa Casp.)

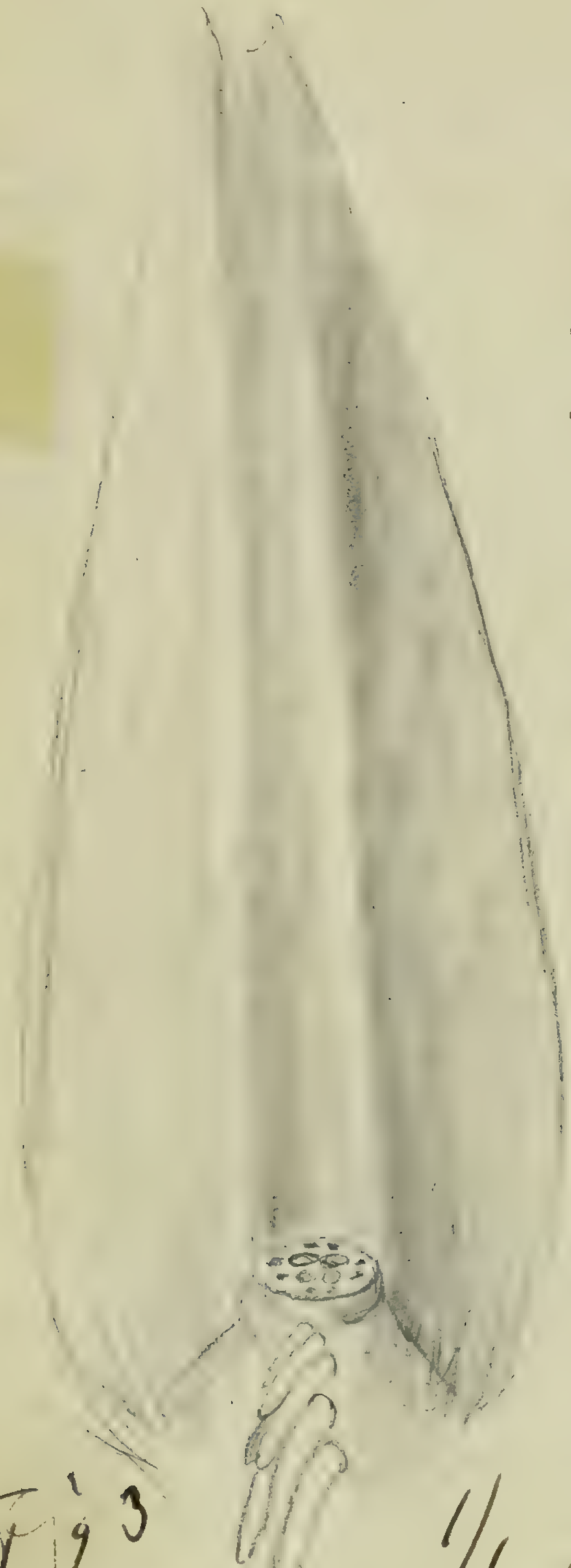


Fig 3 m. n. 1/1

0 1 2 3 4 5 6 7 8 9 10
cm
copyright reserved
MISSOURI BOTANICAL GARDEN

0 1 2 3 4 5 6 7 8 9 10
cm
copyright reserved
MISSOURI BOTANICAL GARDEN

0 1 2 3 4 5 6 7 8 9 10
cm
copyright reserved
MISSOURI BOTANICAL GARDEN

Nuphar odorata var. sanguinea
Hutt - 86 An. Phil
has almost all stamens transformed
into petals. f. W. Durand

MISSOURI BOTANICAL GARDEN
GEORGE ENGELMANN PAPERS

0 1 2 3 4 5 6 7 8 9 10
cm copyright reserved
MISSOURI BOTANICAL GARDEN

Rec. Jun. 7

Konigsberg in Prussia
June 6, 1868

Dear Friend !

Heartly welcome to Europe. Unfortunately I call tha payan much later than it should have been, as I was lately very strenously occupied, in examining flowering items. In order to get an overview of the quality of pollen, I counted the pollen grains, good and bad, of some 100 plants, in order to be able to better express the relation in the perianth. This is important to me because of the bastards of the Nymphaeae, which have formed here. Today I shall examine a new bastard, which has just now developed its flowers: Nuphar luteum X advena. This bastard is very interesting, varies in the color of the blossoms, and keeps the middle of both ..... older ones. Nuphar advena - pumilum and pumilum-advena unfortunately do not yet flower. Of Nuphar advena I grew 9 year old seedlings in a pond, from seeds from Leipzig, which are shaped quite different from the older plant in Leipzig. Nymphaea ..... stands the Winters here well, but floweres quite rarely; Nymphaea odorata is very tender, in the open can only be handled under cover; flowers little, never here, not even with artificial illumination. You write, I am surrounded by Americans. The more so I wish, tha t you come here and communicate more detail. Is'nt that possible to accomplish ?? You can stay with me; I have a guest-room. But , you would have to come prior to the beginning of July. The middle of July I go to Lappland on account of the Nuphar, which I cannot examine from the distance when dried, and, which I have not received alive despite all efforts, and which I need. The ministry has provided me with money for the trip. Can't you come this month here ?? I am of course quite sorry, that I cannot make the problem easier for you. A trip of 80 miles is not pleasant, but in 13 hours you would be here. And you could see Nymphaeas at my place, which you could not see in the entire world. In the open they are in part in their last flowering, and yesterday Nym. alba sphero.....

0 1 2 3 4 5 6 7 8 9 10
cm
copyright reserved
MISSOURI BOTANICAL GARDEN

rosea from Spain with about 30 deep-carmine-red blossoms open. The weather is ver fine with us, and promises to remain that way.

Thank you for your literary excerpts. Best greetings to your wife and your Georg, and equally to all of Braun's (the end of the sentence is not legible. E.D.).

I hear you will leave Berlin the beginning of July. I go to Lapland not by way of Berlin, and cannot remain anyplace on the return trip. If you do not come here, there may be the possibility of a meeting after the return from Lapland in Berlin or elsewhere. I hope to meet and see you in any case.

In hearty friendship, Your R. Caspary

(translated from German script by Edgar Denison, July 1988)

(translation of cover-sheet on separate page. Text is NOT in Caspary's hand-scribbling*. E.D.)

* should be "hand-writing"

0 1 2 3 4 5 6 7 8 9 10
cm
copyright reserved
Missouri Botanical Garden

Frontpage of Caspary letter June 6, 1868. Text to drawings::

Nymphaea odorata Fif. 1 and 2 Stipula

Fig. 1 Rhizome sent to me by Eaton in wine spitits from North America.

Fig. 2 Rhizome of a plant grown in the Boroiz Garden in Berlin in a heated pond, fed by the condensate water of a steam engine in the open at + 24 R (Rheaumier, E.D.) water-temperature, very opulent and strong, the rhizome thicker than the N. Amer. from Eaton.

Nymphaea alba L.

Fig. 3 Stipule of a rhizome from the Laacher Lake near Andernect (Var. depressa Cnep.)

Nuphar odorata var sanguinea Nutt - Hb Au Phil

has almost all stems transferred into petals

Fide Durant

0 1 2 3 4 5 6 7 8 9 10
cm
copyright reserved
Missouri Botanical Garden

Rec^d Naples Nov 18th

Caspary

Königsberg in Pr.
2. November 1868

Lieber Freund!

Schon seit dem 2. October bin ich wieder hier, aber ich komme erst heute dazu Ihnen das Verzeichniß [illegible] das ich Ihnen versprochen habe, um es Ihnen zu [illegible] [illegible]. Ich habe Isoetes echinospora überall von 65° n. B. — 68½° n. B. in Norrbotten, Luleå und Torneå Lappmarken gefunden, meist sehr niedrige Exemplare, kaum halb so groß als die bei uns gewachsenen sind. Isoetes echinospora war auch nicht selten. Andere [illegible] z. B. alpinus [illegible] ich selten. Isoetes [illegible] fand ich bloß bei Wakaniwa [illegible] Muonio [illegible] [illegible] [illegible] Wallich [illegible] [illegible] [illegible] [illegible] der 11. (?) oder 12. (?) [illegible] —

MISSOURI BOTANICAL GARDEN
copyright reserved
cm 0 1 2 3 4 5 6 7 8 9 10

MISSOURI BOTANICAL GARDEN

verwischt.

Ich weiß seit 9½ Monaten gar nichts von Ihnen. Nach meiner Rückkehr hatte ich solche Berge von Briefen u. dringende Geschäfte abzumachen, daß ich noch gar nicht recht dazu gekommen bin, die Lücken auszufüllen, die die Reise in meinen Wissen und meinem Herbarium gemacht hat. Die Reise war nicht sehr befriedigend, da ich meist zu krank und [illegible] u. oft zu [illegible] war, [illegible] [illegible] [illegible] sehr [illegible]. Ich habe mich sehr wenig mit meinen Pflanzen [illegible] mit Nymphaeaceen beschäftigen können. Näheres über meine Reise werde ich Ihnen später gedruckt zu schicken.

Mit herzlichsten Grüßen Ihr
ergebenster Rob. Caspary

Haben Sie doch die Güte mir den Namen des [illegible] zu [illegible] zu sagen von Kannojärvi, [illegible] gegen die [illegible], die ich [illegible] habe, [illegible]. Ich habe nur [illegible] 1 [illegible] [illegible] [illegible].

Missouri Botanical Garden
George Engelmann Papers

copyright reserved
Missouri Botanical Garden

cm 0 1 2 3 4 5 6 7 8 9 10
copyright reserved
MISSOURI BOTANICAL GARDEN

Geom. Dr. G. Engelmann

Rec. Naples Nov.18

Konigsberg in Preussen
November 2,1868

Dear Friend !

Already since October 2 I am again here, but I get only today to select the few Juncus ,which I found in quantity,I found Juncus filiformis every place from 65 n.O. - 68 n.O. in (1,2,3) mostly very low specimens,hardly one half as high as they grow with us. Juncus _____ was also not rare.Other Junci,e.g. alpinus I saw rarely. Juncus foedidus L. I only found near Wakaniwa on the Muonio in the russian and upon the Wallch (? E.D.) consisting of gneiss near ;are already brown-green as it was September 11 (?) or 12 (?).- The label with the plants gives the date correctly. - are quite foreign. Juncus _____ and _____ I saw no place. However I was little in the mountains as there were hardly any Nymphaeae there.

What the Nymphaeaceae concerns, I was very fortunate and listed the rushian,which provided the genus for the northern plants - 9 corms to Lonstadino (? E .D.). It is here in Nuphar luteum and pumilum and bastards 1,2,3, and others in .. The bastards have bad pollen and develop very few seeds. Nuphar intermedium Anders & Ledebour is a bastard. It stands between Nuphar pumil. & luteum.- Anderman's statement, that Nuphar intermedium exists in Lappland is wrong. Nymphaea alba nigrostigma aperta I found to 67½ n.O. north,far the other side of the polar circle.

I know nothing of you since 3½ months. Since my return I found mountains of letters and endless business to accomplish,that I can not get to it, to close the gaps,which the trip has made into the free-time for my friends. The trip was mostly very strenuous, as I had to travel mostly in a boat on rivers or on foot, the distances enormous and, therefor, very time-consuming. I was not able to occupy mysekf with other plants much besides Nymphaeae. More detail

0 1 2 3 4 5 6 7 8 9 10
cm
copyright reserved
Missouri Botanical Garden

about my trip I shall send to you later in printed form. With heartiest greetings your most devoted

Rob. Caspary

Please have the kindness to let me have the name Innino (?? E.D.) of Kannisjaris; unfortunately the two specimens I had of this were lost, and I brought only one specimen of it here.

(translated from German script by Edgar Denison, August 1988)

0 1 2 3 4 5 6 7 8 9 10
cm
copyright reserved
MISSOURI BOTANICAL GARDEN

Rec. March 5th 1877
Answ. — 20

Strassburg in E.
11.2.77

Lieber Engelmann!

Besten Dank für Ihre Briefe vom 5. Juli u. 19. Oktbr 76, die 3 [illegible] Nymphaea flava (Samen der Agave). — Zuerst die Frage: haben Sie ein [illegible] [illegible] von mir vor etwa 1½ Jahren durch die Smithsonian Institution erhalten? Es wäre mir leid, wenn das verloren wäre.

1) Was die Flora von Californien betrifft, die von Ihnen die [illegible] aufschickt, bitte ich sehr mir den Titel ganz zu schreiben, daß ich dies mir bestellen kann. Ich muß das Buch haben.

2) Was das Material betrifft die nordamerikanischen Hölzer anatomisch zu [illegible], [illegible] [illegible] [illegible], da ich damals um [illegible] [illegible] die [illegible] [illegible] zu bitten, um Holz von nordamerikanischen Bäumen als wichtig [illegible], da ich einen anatomischen Überblick über dieselben [illegible] bekommen muß. [illegible] hat mich nämlich für sich lange gewünscht, daß ich mich entschließe die pflanzlichen [illegible] [illegible] Hölzer zu bearbeiten. Da zeigt sich nun, die Verwandtschaft der Baum[illegible]pflanzen mit den nordamerikanischen [illegible] [illegible] [illegible] [illegible], [illegible] [illegible] [illegible], als er es wünschte, da ich kein [illegible] die jetzt lebende nord-amerikanische Flora [illegible] [illegible] [illegible]. Außer z. B. folgende neue Anlagen, die [illegible] [illegible] [illegible]: a) eine ausgezeichnete [illegible] [illegible] Stück von Stewartia

die ich Kowalewski nannte, ist in meinen
Gründen, etwa 1'' im Durchmesser, jetzt ähnliche
in Florida, Georgia. b) mehrere Stücke
welche gross, welche ebenfalls nicht Sabal
sind, Sabalites Kunowii Casp., c) eine
Carya, d) Celastrus u. Rhamnus Früchte oder
Blüthen, die merkwürdiger Weise früher beobachtet u.
Cath. verschieden sind. — Ich lege die ~~Ze~~ durch-
gezeichnete Zeichnung meiner ausgezeichneten
Bernsteinstücke bei: Fig. 8 nat. Gr. Fig 1, 2, 3 vergr.,
Fig 4–7 dieselbe von verschiedenen Seiten.
Die Zeichnung giebt genug Aufschluss, ich
kann mir Worte sparen. Ich habe die Pflanze,
die etwa sehr klein ist, für eine Cactacee halten
mögen u. sie Patzea cactoides genannt,
auch beschrieben ich in einer (Note kurz in den
Sitzungsberichten der physik.-ökon. Gesellschaft, die
Sie in St. Louis haben. A. Braun, der mich
vor 2 Jahren hier besuchte, meinte es sei diese
3) Pflanze eher eine Arceuthobium, als eine Cac-
tacee. Ich kann mich der Ansicht nicht anschliessen.
Da Sie sich jedoch mit Arceuthobium besonders
beschäftigt haben, möchte ich Sie um Ihre Ansicht
bitten. Ich kenne nur Arc. Oxycedri, habe jedoch
nur mündliche Pflanzen. Nach Hookers Abbil-
dung (Fl. boreali americana) scheint Arceuthobium
Oxycedri u. wohl alle Verwandten aus 2 Gründen
nicht 1) Patzea hat einen Kreisel, welcher oben
völlig ganzrandig u. nicht 2 lappig, wie bei Arceu-
thobium ist. 2) Patzea hat auf den nicht blüthen-
tragenden Ästchen lange, lineale, fleischige, zu-
rückgekrümmte Blätter; die bei Arceuthobium sind

alle dreiachsig verzweigt. Dann die kürzeren
Spitzen die und doch einige [illegible] der nord-
amerikanischen [illegible] z. B. Abies [illegible] unter-
scheiden. Die Gattung Taxodium ist gleichwohl sehr
[illegible] [illegible] [illegible].

Im Bernstein fand ich auch dreinadelige Kiefern,
die also an P. Taeda erinnern. Ich habe [illegible]
[illegible] Blüthen.

Die diluvialen Hölzer sind sicher zum größten
Theil nicht aus dem Diluvium, sondern aus älteren Bil-
dungen u. die nordamerikanischen Bäume dürften
sich zu sehr in Betracht kommen. Ich habe schon einige
hundert [illegible] Schliffe solcher Hölzer [illegible] [illegible]
der [illegible] [illegible]. Es wäre mir sehr wünschenswerth
recht Hölzer von nordamerikanischen Bäumen zum
Vergleich zu haben, besonders auch [illegible]. Ich würde gern einige hundert
Mark (1 Thlr = 3 Mark) 200 – 300 Mark für ~~[illegible]~~
eine gute Sammlung, die von Ihnen richtig bestimmt
ist, zahlen. Denn [illegible] [illegible] [illegible] [illegible]
[illegible] von Zweigen, Blüthen u. Laubstücke werden
mir auch sehr lieb; besonders Blüthen und Blätter
[illegible], der [illegible] [illegible] im Bernstein [illegible] [illegible]
ist die Blüthenstände der Quercus u. Castanea-artigen [illegible]
[illegible] [illegible].

Für Nymphaea flava besondern Dank. Ich
habe 4 Knollen von Cambridge erhalten. 3, die
besten, waren [illegible] erfroren, da wir schon
−7° R im November [illegible] hatten. Einige die
Stämmchen, [illegible] u. [illegible] [illegible], ich hoffe sie durch-
zubringen. Kann ich nur die Pflanze nicht. Die
ist von Andrieux in Mexico 1834 schon ge-
funden. Gestern sah ich im Th. J. Gay'schen Hb. [illegible]
bei Gay [illegible] ein Zettel mit folgender Aufschrift: „No 541
Nymphaea à Yotla, dans le lac de Chalco
14 Mai. Fl. rouge et jaune, C'est le jaune
qui domine." 1 Blüthe u 1 Blatt in gutem Zustand im
r h. Mus. paris., h. Delessert

blühen sehr ähnlich. Ich habe die Pflanze (früher Nymphaeaceen) in meinen
Edenda [illegible] und Nymphaea Blanchetiana MS.
vor fast 20 Jahren benannt. Zum Theil ist
die Nymphaea tussilagifolia Lehm., vielleicht
auch N. mexicana Zuccarini (nicht von Gray,
die Pflanze Gray's ist Nym. elegans Hook., weiss
blühend). Es ist mir nicht leicht gelungen, obgleich
Lindley, Brown u. A. Braun, auch Prof.
v. Martius sich alle Mühe in Berlin gaben, mir
Abdrücke der 6 Tafeln der Nymph. flava aus Audubon's Werk in Folio zu verschaffen; es ist
in der königl. Bibliothek zu Berlin nur defect
da. Ich würde mich nach dem brittischen Mu-
seum wenden müssen, was ich bis ~~jetzt~~ nicht
gethan hab. Ich bin Ihnen sehr, sehr dankbar,
dass Sie mir Nymph. flava haben zu sen-
den lassen. Nun wird sich die Stellung der
Pflanze wohl gut bestimmen lassen; es
ist wohl die 1. Nymphaea der Sektion
Lotus in America, die die linealen [illegible]
[illegible] Fortsätze, den ganz glatten Blüthen-
staub, die [illegible] darauf [illegible]. Eben
habe ich die Nymphaeaceen für die Flora bra-
siliensis von v. Martius fertig gemacht und
an Eichler geschickt; dabei 11 Tafeln mit [illegible]
[illegible], alle [illegible] Originalen
abgebildet, die [illegible] zu wünschen lassen.
[illegible] eine neue, kleine Nymphaea
N. [illegible] Casp., welche die Blüthen [illegible]
allein, durch Hildebrandt erhalten. Ich arbeite ununter-
brochen an den Nymphaeaceen. Das Werk wird Mühe
haben. Die Darstellung ihrer Arten durch [illegible]
sind sehr, sehr [illegible], lasst aber [illegible]. Ihr Nuphar Kal-
mianum ist eine gute Art, zieht mit Nuphar pumilum
[illegible] Zustand.

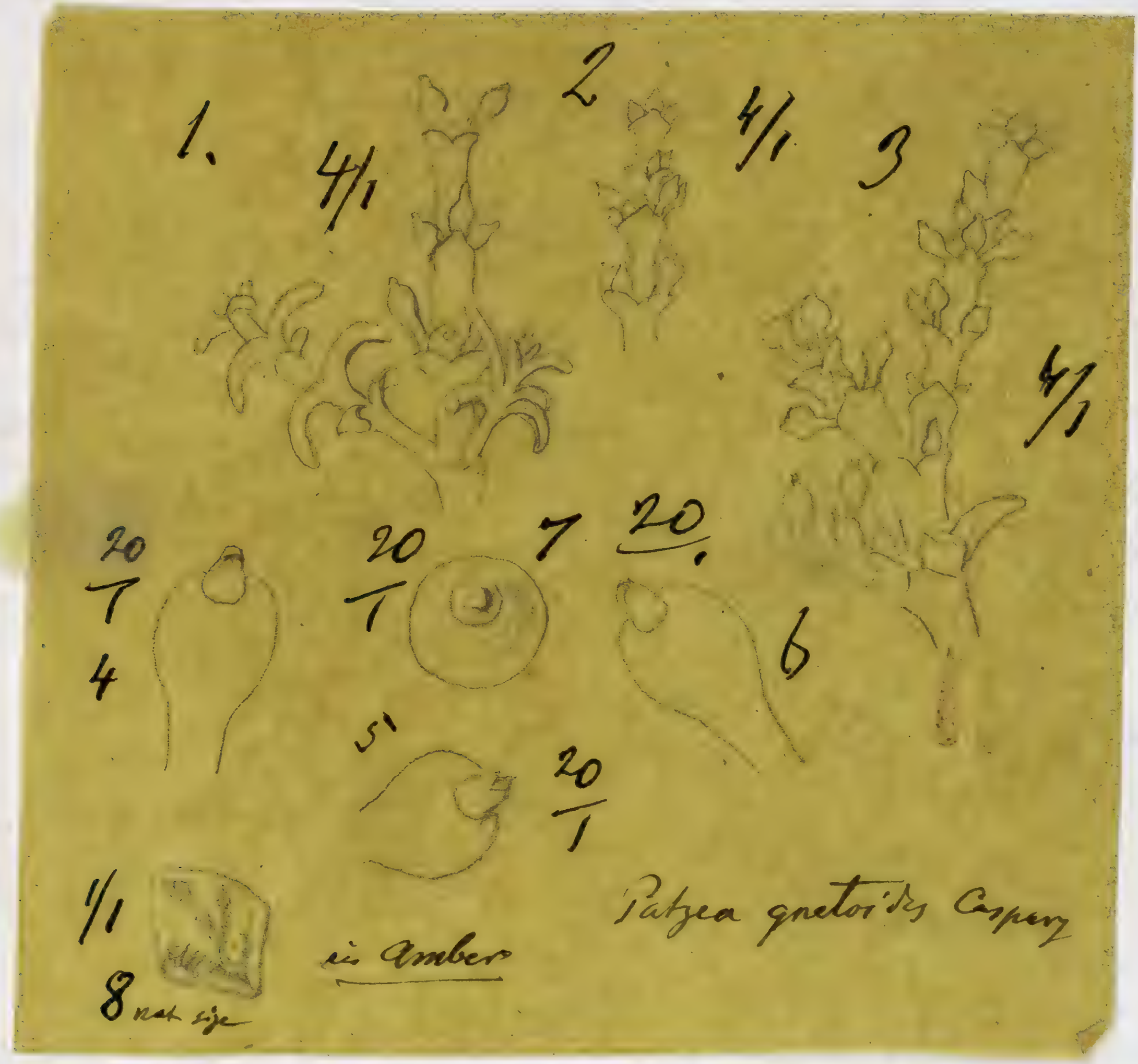
Caspary rec March 5 1877

MISSOURI BOTANICAL GARDEN
GEORGE ENGELMANN PAPERS

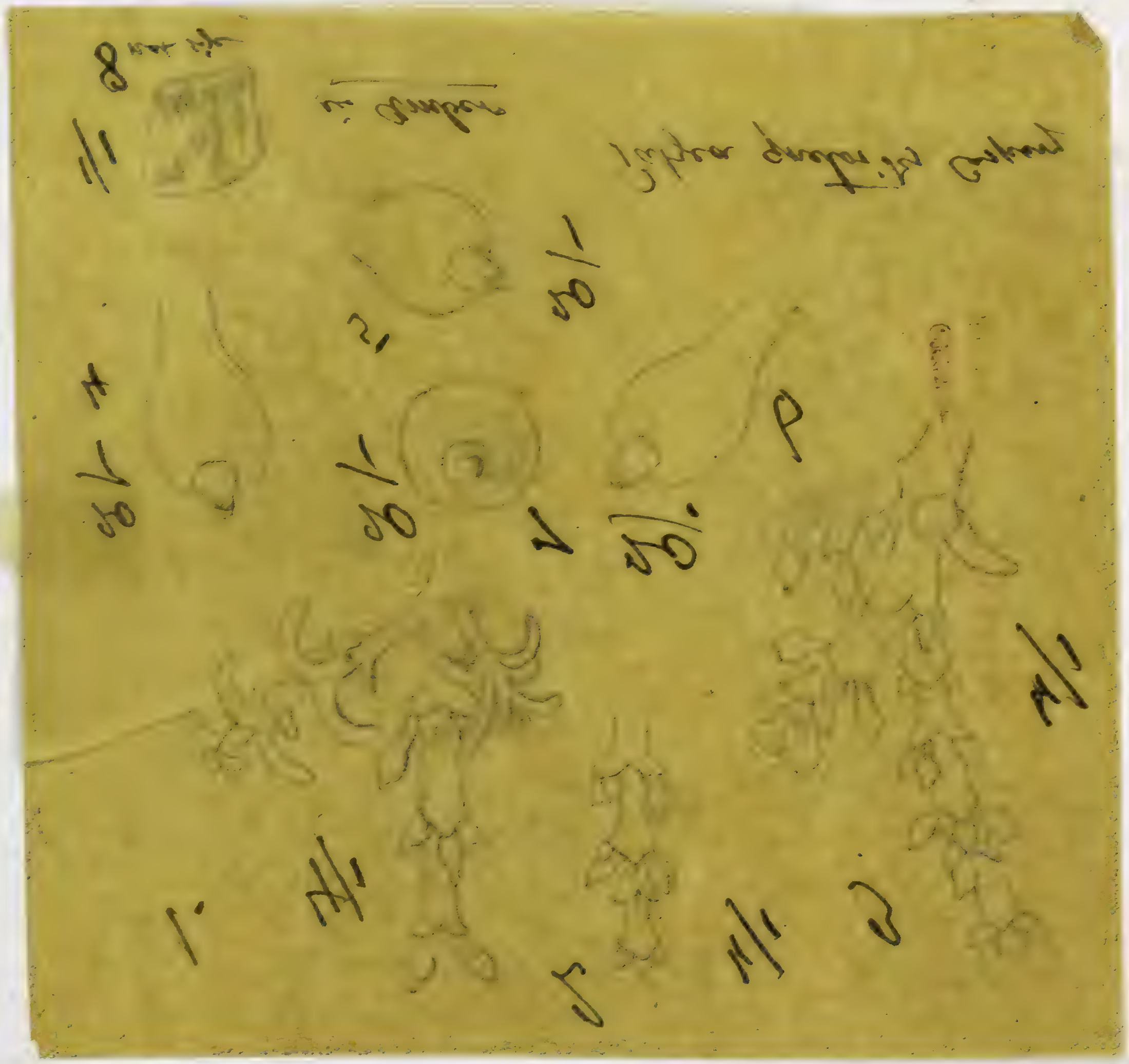
Nun noch eine Bitte! Zu meiner Erholung,
4) die ich auch haben muss, mache ich alle Jahre im
Herbst einige Exkursionen in [illegible] Provinz, die
meist terra incognita ist u. grosse mit eigenem
Boot u. 2 Leuten, [illegible] Wagen [illegible] Boot u. [illegible]
von See zu See; ich [illegible] [illegible]
[illegible] untersuchte ich [illegible] mehr als 70
Seen. Für die Verbreitung der Nymphaeaceen
[illegible] sehr interessante Beiträge. [illegible]
[illegible] systematische [illegible]
phytogeographische [illegible]
[illegible] Ich [illegible]
aber alle [illegible] alle [illegible], die ich [illegible]
[illegible]
[illegible] Unbekannte [illegible]
[illegible]
[illegible]
2 [illegible] Interesse [illegible]
[illegible] Nordamerika [illegible]
Conomitrium julianum, [illegible]
[illegible] gefunden, [illegible]
in Nordamerika [illegible]
[illegible] ganz [illegible] Fontinalis, [illegible]
Typus der nordamerikanischen Fontinalis dalecarlica.
Nun die Bitte: besorgen Sie mir doch
1) Conomitrium julianum aus nordamerika-
nischen Standorten u. 2) Fontinalis dalecarlica
Sullivant [illegible]! Ich [illegible]
[illegible] [illegible]
Nun [illegible]
[illegible]!! Herzlichste Grüße an Ihre [illegible]
[illegible]. In grösster [illegible] Ihr

[illegible] R. Caspary
[illegible]

MISSOURI BOTANICAL GARDEN
copyright reserved
cm 0 1 2 3 4 5 6 7 8 9 10



0 1 2 3 4 5 6 7 8 9 10
cm
copyright reserved
MISSOURI BOTANICAL GARDEN



0 1 2 3 4 5 6 7 8 9 10
cm
copyright reserved
MISSOURI BOTANICAL GARDEN

Rec. Mar. 5
Ans. " 20

Konigsberg in Prussia
Feb. 11, 1877

Dear Engelmann !

Best thanks for your letters of July 5 and October 19, 1876, the 3 manuscripts and seeds of Agave and Nymphaea flava. - First the question : Did you receive the packet of essays of mine about 1½ years back through the Smithonian Institute ? I would be sad, if it got lost.

1) As to the Flora of California, which contains yours of the Cacti, please write the entire title, so that I may order it. I must have the book.

2) As to the wish, to see the north-american oaks anatomi - cally treatet, it surprised me, because I was then about to write to you with the urgent request, to send me the wood of as many northameri- can trees as possible, as it was absolutely necessary, that I get an anatomical overview of them. There has been pressure here for a long time, 'til I decided to work on the plant inclusions in am - ber and the diluvian timbers. This shows now the relationship of amber-plants with the north-americans, which was known already to Göppert, in a much stronger degree, than he knew, and I am very much turned to the now living american Flora. For this new proofs, other than those, which Göppert gave : a) an outstandingly well preserved flower of Stewardia, which I named Kowalewskii, is in my hands, about 1" in diameter, now similar in Florida, Mexico. b) several pieces, rather large, with impressions of Sabal....., Sabalitis Renowii, Carp. c) a Carya d) Celastrus and Rhamnus fruits or flowers, which at least today are present specially in Iran (? E.D.). I enclose the traced drawing of an oustanding fragment: Fig. 8 Gr. Fig. 1, 2, 3 branches, Fig. 4-7 fruits od various sorts. The drawing gives enough information, I can spare the words. I may consider the plant, which is very small as a Gaetacea ? and called it Patzea gaetoides and

0 1 2 3 4 5 6 7 8 9 10
cm
copyright reserved
MISSOURI BOTANICAL GARDEN

described in nuci, very briefly in the meeting reports of the Physiological (?.E.D.) Society, which you have in St. Louis.

3) A. Braun, who also visited here 2 years ago, thought the plant was an Arceuthobium, rather than a Gaetacea. I can't agree with the opinion. As you have worked specially with Arceuthobium, I want to ask you for your judgement. I know only Arc. oxy ..... (oxycidei ? E.D.) but have only male specimens. According to Hooker illustration (Fl. borealis americana) Arceuthobium oxycidei and probably the relatives do not fit for 2 reasons) 1) Satzia has a perigon, which on top is entirely fullrimed (i.e. "entire" E.D.) and not 2-lipped as with Arceuthobium. 2) Satzia has on the branch portions, which do not carry flowers, long, linear, fleshy, recurved leaves; those of Arceuthobium are three-cornered, drooping. If you can, please send me some types of northamerican Arceuthobia, e.g. Arc. varietum (? E.D.). The genus Gaetum with rounded leaves fits better.

In Bronstein I find also three-needle pines, which all remind of P. Taeda. I have of it several pieces.

The diluvian timbers are certainly to the largest part not from the diluvium but from older deposits, and the american trees should come much into consideration here. I have several hundred polished pieces of such timbers of the diluvium, most of them are Pines. It would be most desirable for me to have timbers of american trees for comparison. I would gladly pay several hundred Mark (1 Thr = 3 Mark), 200 - 300 Mark for a good collection, which has been correctly identified by you. You could determine the price. Cones of conifers, flowers, leafstems would be very welcome; specially flowers with pollen, which is found abundandly in amber. Of course, the pollen of Pinus and Picea species are related to each other.

Special thank for Nymphaea flava - I received 4 ~~pumps~~ clumps (rhy - zomes ? E.D.) from Cambridge. Three, the best, were frozen on the

0 1 2 3 4 5 6 7 8 9 10 cm
copyright reserved
Missouri Botanical Garden

way, as we had already in November - 7 R (Reaumier, E.D.). But the smallest one cultivates and grows well; I hope to get it through. The plant is not new to me. It was found in Mexico by Andrinesi around 1824. Specimens I saw in Ch. J. Gay's hb; written (? E.D.) by Gay lay a slip with the following inscription:"Nro 541 Nymphaea à Yotla, dans le lac de Chalco May 14. Fl. rouge et javine (c'est le janne qui domine)" 1 flower and one leaf to each herbarium H. mus. Paris, h.Delesert.. Flowered very poorly. I did draw the plants for my Nymphaeaceis Edendis and named Nymphaea akmost 20 years back. In part it is Nymphaea tussilagifolia Lehm,may-be also N.mexicana Zuccariei (but not Gray,the plant of Gray is Nym. elegans Hook,because blueish). I have not been successful to get a copy of the text for Nymphaea flava from Audubon's work in folio, though Cecilie Braun and A. Braun,and also Prof.Martens tried very hard. It is only in the royal library in Berlin. I will have to aproach the British Museum,where I did see the work actually. I am very, very thankful to you, to let me have the Nymphaea flava. Now, it will be possible to determine the genus of the plant; it is probably the 1. Nymphaea of the section Lotus in America; the linear stigmatic elongations,the entirely smooth pollen,the runners point to this. - I just prepared the Nymphaea (alacea,E.D.?) for the Flora Brasiliensis by V. Martinis and sent to Eichler; with it 11 tables with very precious pieces, all mine and originals, in illustrations,as far as they could be obtained. Received from Zerpiter (? E.D.) again a new,blue Nymphaea, N.sansibariensis,probably the prettiest of them all, through Hildebrandt. I work without stopping on the Nymphaeaceae. Good work takes time. The determination of species through crossing,delays me very,very much, but provides solid ground. Your Nuphar is a good species;

0 1 2 3 4 5 6 7 8 9 10 cm copyright reserved MISSOURI BOTANICAL GARDEN

forms with Nuphar pumilum a very sterile bastard..

Now a request.. For my recreation,, which I too must have, I undertake each year several excursions in the Fall into the local province, which is mostly terra virginica and move with my own boat,, 2 men and wagon for the boat and horse from lake to lake; I myself am. of course, on foot. Last Fall I examined in 3½ weeks more than 70 lakes. This gives me very interesting contributions for the distribution of the Nymphaeaceae. In this I arrange constantly and systematically for phytographic demands and important publications.. I do not collect sites, but every quarter mile all plants, which I find, and also all plants, which I find in the lakes which are critical or unknown I take along.. The mosses I send to Mr. Schimper to Strassburg; He writes to me today, that I had found 2 of great interest, and these point again to northamericans; This is Conomytrium inlianum, very rare in Europe, and has never been found in a lake, except in North America and the Southern States; and second, an entirely new Fontinatis of a type of the northamerican Fontinatis disticha.. Now the request :: Please get me 1) Conomytrium inlianum from South American swamps,. and 2) Fontinatis dis..... Sullivan is probably dead ?? I know of nobody in NAM who collects them..

Hearty greetings from my wife, who invites you to come to us !! Best greetings to your wife and Georg. Your greatest admirer, Your

R. Caspary

The following page I can not tear loose from dense lobe.

(translated from German script by Edgar Denison, August 1988)

0 1 2 3 4 5 6 7 8 9 10 cm copyright reserved Missouri Botanical Garden

Rec April 20th
Ans May 6

Königsberg 1877
den 6 April ~~1877~~

Lieber Engelmann!

Ich schreibe an Ihnen einen
Nachricht zu berichten, die Sie sicher
ebenso schmerzlich berühren werde,
als wir davon getroffen sind!
Alexander Braun ist nicht mehr
unter den Lebenden. Er ist am
Gründonnerstag den 29. März früh
um 7 Uhr 35 Minuten an Brustfell-
entzündung gestorben.
In der Nacht von Mittwoch zu Don-
nerstag vom 21/22 März 1877 erkrankte
er, indem er merkte an rheumatischen
Schmerzen in der Brust, u. an Fieber.
Der 22. u 23. März waren erträglich.
Am 24. März stellten sich heftige
Schmerzen in Schulter u. Handgelenke
ein. Nachmittag verordnete sein
Arzt: Dr. Thorgsmann Morphium,
die nächste Nacht war ruhig.
Sonntag den 25. März wiederholte
sich der Anfall mit vermehrten
Kräften; Morphium war erfolglos.
In der Nacht von Sonntag zu Montag
wurden die Athmenbeschwerden stärker,
so daß der Vater von seinem

Zeit zu schwachen begann. Zwischen
schon 4 u. 5 Uhr früh erwachten die
Kinder geweckt, womit der Abschied
beschleunigt wurde. Der Vater traf
einige Anordnungen über seine
Beerdigung u. [illegible], die ich noch nicht
näher erfahren habe.

Montag, den 26. März, ist Dr.
Bergmann schon um 7 Uhr bei ihm
u. [illegible] [illegible] [illegible] zu [illegible];
es wird eine Entzündung der
[illegible] [illegible] der [illegible] [illegible]
[illegible] 10 Schröpfköpfe, 2 Blutegel u.
8 trockenen angewendet.

Dienstag früh d. 27 März, [illegible] [illegible]
[illegible] [illegible] um 1 1/2 Uhr früh,
alle Familienglieder um das Bett
des Vaters; Johannes war noch da.
Der Vater nimmt von allen Abschied,
segnet sie u. betet mit ihnen [illegible]
[illegible] Johannes u. bittet alle Anwesenden,
daß er mit Namen genannt werden.
Dann schlummert er ein, erwacht aber
mit großen Schmerzen u. [illegible] fortgesetzt
nach Erlösung durch den Tod. [illegible] Schlaf
u. [illegible] mit [illegible] der [illegible]
wiederholten sich öfters. Als Bergmann
um 7 Uhr früh kam, hatte er jeden
die Krankheit noch nicht zum letzten
Stadium vorgeschritten, aber [illegible]

MISSOURI BOTANICAL GARDEN
GEORGE ENGELMANN PAPERS

0 1 2 3 4 5 6 7 8 9 10 cm
copyright reserved
MISSOURI BOTANICAL GARDEN

all trades" nicht, dem großen Publi-
kum, welches nicht [illegible]
glaubt, durch Zeitungsschrei-
ben u. [illegible] Abhandlungen
[illegible] [illegible] Arbeiten [illegible],
aber es zu großem Ruf gebracht hat.

Ich weiß daß es nicht möglich
ist Ihnen darum zu ersuchen,
aber, weil ich [illegible], von Ihren bekannten
[illegible] in Deutschland haben
wollte ich Ihnen mit [illegible] [illegible].

Zum Angedenken, das heute um
9 Uhr [illegible], statt haben soll, konnte
ich nicht [illegible]. Wenn [illegible] bedarf
[illegible] zu [illegible], weil sie [illegible]
sich in Behandlung der [illegible]
Erscheinungen unserer Stadt Prof.
Schönborn befindet, weil ein [illegible],
(Operations[illegible]) den [illegible] kein [illegible] recht [illegible]
hat, ihr [illegible] Noth machte. Sie kam
nicht [illegible] u. [illegible] die [illegible] [illegible]
in der [illegible] [illegible] oben unter der
[illegible]; hoffentlich gelingt es Schönborn
[illegible] [illegible] zu be-
[illegible].

Viele besten Grüße an meine
Frau & mich von d. [illegible] mit herz-
lichster Hochachtung

Ihr
Robert [illegible]

Rec. April 20
Ans. May 6

Konigsberg, April 1,1877

Dear Engelmann !

I write to annouce a loss to you,which will touch you yourself as much as we have been hit. Alexander Braun is not living any more - he died on Maundy Thursday, March 27 in the morning at 7:35 of inflamation of the breast-cage (pleuresy, E.D.).

He took sick during the night from Wednesday to Thursday,March 21/22 1877,with, as he thought, rheumatic pains in the lungs and with fever.

The 22. and 23. of March were tolerable. On March 24 appeared pains in the shoulder and abdominal muscles. During the afternoon his doctor, Dr.Strassmann prescribed morphine. The next night was tolerable. Sunday, the 25th the attack recurred with more fever; morphine did not work. During the night Sunday to Monday breathing became very difficult , so that the father began to talk of his death. Between 4 and 5 in the morning the children were waked up because the end is feared. The father gives certain instructions about his collections etc. of which I have not yet learned any details.

Monday, March 26 Dr. Strassmann is there already at 7 AM,and and brings Prof.Waldenburg for consultation,diagnosing an inflamation of the left side of the breast, ordering 10 cupping glasses,2 bloody and 8 dry. Tuesday, March 27 early, Julie,who awoke, called all members of the family to the bed of the father; Johannes was also there. The father takes leave from all,blesses them,and prays with them,talks to Johannes and conveys greetings to all absent ones by their names. Then he falls asleep,but awakes with great pains,and calls all the time for deliverance through death again and again. When Strassmann gets there at 7 AM,he finds the sickness not yet advanced to the ultimate stage and neither does Waldenburg later,and the father is being urged to take medicine, which he refused in the conviction,that he

0 1 2 3 4 5 6 7 8 9 10
cm
copyright reserved
MISSOURI BOTANICAL GARDEN

was stronger. The first night, Tuesday to Wednesday and also the Wednesday passed quietly, in fact, really better. However, Wednesday, March 28 severe fever developed toward evening, and the father began to talk confusedly. Thursday, early around 5 o.c. he became quieter, the death began, and at 7:35 life was lost...

We both lose in him a true, trusted friend, I the best I ever had. But for science the loss is of immense significance. Most to be regretted is, that he did not combine in one opus his spores in a monograph nor his morphological research. I consider him as the most important, knowledgable and deepest botanist of the times, with an outstanding character. The younger generation has unfortunately very many pushers (ambitious ones, E.D.). Rachs specially, who is supposed to be a firm character, has as "Jack of all trades" (verbatim in the text, E.D.) has got a huge reputation in the large public, which includes the medical group, through writing of handbooks and rewriting of original subjects of sound judgements.

I know, that it is not possible to replace your Braun, but, to my ability, I will gladly supply what botanical needs you may have in Germany.

To the burrial, which is supposed to take place this afternoon at 3 pm I can not go. My wife needs me at home, because she is in treatment of the most oustanding surgeon of our city, Prof. Schönhorn, because a fracture (thigh) gives her great trouble as no binding has properly closed it. She cannot walk and the worst pains are are on the right side, up below the breast; hopefully Schönhorn will be able to provide a breast-binding.

With best greetings from my wife and me to yours with hearty veneration Your Robert Caspary

(translated from German script by Edgar Denison, July 1988)

0 1 2 3 4 5 6 7 8 9 10 cm
copyright reserved
Missouri Botanical Garden

Rec Sept 24
Ans Oct 3d

Königsberg in Pr.
1. Septbr. 1877

Lieber Freund!

Wieder habe ich die traurigste Veranlassung Ihnen zu schreiben, es hat mich jetzt der schmerzlichste Verlust betroffen, den ich erleiden konnte. Meine theure Frau ist am 29. August Nachmittags 2 Uhr an einer Lungenschlagaderentzündung der [illegible] nach nicht ganz 11 tägigem Krankenlager gestorben. Ich schrieb Ihnen, daß sie im März und April sehr viel durch einen [illegible] Gelenkrheumatismus zu leiden hatte. Die [illegible] ist schlimm, daß ich mich an der [illegible] Universität und [illegible] machte, die mit großer [illegible] und [illegible] [illegible] machen müssen [illegible] zu Ende brachte. Ich musste meine Frau zu einem Dr. Langendorff nach [illegible] schicken, der auch [illegible] und noch nach vielen [illegible] [illegible] war. Diese [illegible] in den [illegible]

zwar abzunehmen schien, aber uns
[illegible] gerechter Zustand wenige
Stelle. Die [illegible] der Dr. Schüssler
Doktor behaupteten das [illegible] sei zwar
abwärts die [illegible] noch gar nicht ange-
griffen. Zu meiner großen Freude
kam den 11. Aug. abends [illegible] Mutter
[illegible] zu mir gefahren an. Am 12. Aug.
Nachts wurden wir früher geweckt; ich [illegible] sie
am Vormittage 3 mal, das letzte Mal
um 1¼ Uhr; sie gab mir die [illegible] Hand mit
Thränen, sagte, daß ihr das gut [illegible] [illegible]
habe [illegible]; ich kann es bemerken ich
wusste gar nicht wo ich bin. Um 2 Uhr
trat die Mutter [illegible] meine Schwägerin
und [illegible] [illegible]. Die [illegible] [illegible]
[illegible] [illegible] lag in den letzten
Zügen. Ein [illegible] und [illegible] [illegible]
[illegible], die [illegible] [illegible]
Athmung [illegible] die Augen hielt offen
die Pupillen [illegible] [illegible] [illegible] ge-
richtet. Nach einigen Augenblicken [illegible]
[illegible] stand still. Eine Stunde darauf
kam der Arzt, der nur den eingetretenen
Tod constatiren konnte. Wir hatten
seit 3 Minuten von meinem Hause aus
dem nächsten [illegible] den 14. Aug. Nach-
mittags 5 Uhr begraben. Wie ihr [illegible]
[illegible] vor meinen Augen die [illegible] ganz
[illegible] [illegible] [illegible] hat die Mutter

cm 0 1 2 3 4 5 6 7 8 9 10
copyright reserved
MISSOURI BOTANICAL GARDEN

April u. Mai durchaus [illegible]. Am 29.
Mai [illegible] starb [illegible] das griff sie immer
sehr an. Dann besuchte sie die Ver-
wandten [illegible] in Oliva(?) bei
Danzig an der See in herrlicher Ge-
gend. Ich konnte leider nicht dort
sein u. wollte dies auch, besonders da
auch [illegible] bei ihr war. Am 29.
Juli kam sie zurück. Am 4. August
ging ich nach dem [illegible] [illegible]
auf [illegible] [illegible], die ich
alle Jahre im Herbst zu machen [illegible]
[illegible] meine Erholung. Die Gegend ist
eine der schönsten Deutschlands. Aber
[illegible]! Am 19/20 Aug. in
der Nacht erkrankte Marie an schweren
[illegible] [illegible], [illegible] [illegible] [illegible]
ganz wie [illegible] [illegible] der [illegible] [illegible]
[illegible]. Mir wurde [illegible] erst
am 24. Aug. [illegible]. d. 25. Aug.
[illegible] zu Hause. Ich fand den
Zustand meiner Lieben sehr bedenklich.
Nach der Erkrankung sollte sie sich nicht
[illegible], [illegible] [illegible] [illegible] durch
[illegible] [illegible] 5–6 Nächte, [illegible]
[illegible] sie [illegible] [illegible] durch die
[illegible] [illegible] von [illegible] Wasser [illegible], die
[illegible] [illegible] worden, [illegible] sollte sie

Rec 24 Sept 1877

Nothschall [illegible] — übrigen Zeichen-
vorlage in guter Entwicklung zeigt
die Gelegenheit zu einem guten Querschnitt
von 1/4 Zoll Quadrat, rechtwinkligen verti-
kalen u. tangentialen Schnitt bietet.
Das größten Stücke zu erlangen, wenn
der Stamm [illegible] dicker wäre sind. Der
[illegible] hat ein [illegible] [illegible] nach
den von Ihnen gesandten Zeichen ge-
sucht, jedoch nicht bestimmt die Art
gefunden. — Ich fand übrigens [illegible]
in einer [illegible] Zeitschrift — ich
kann mich leider nicht [illegible] — im Anfang ist
von über 600 Hölzern [illegible] [illegible]
Phila die auf der allgemeinen Ausstellung in
[illegible] gesandt wurden. Ist
Ihnen da nicht etwas zu erfahren?
— Ich habe 2 Biographien besonders
geschrieben, eine für die Flora von
Regensburg u. eine für Trimen
Journal of botany. Beide mögen
jetzt im Druck sein — Besonders
Zeichnungen, Sammlungen u. Handschriften
letztere [illegible] bis [illegible] un-
[illegible], nur kaum irgend Jemand
[illegible] [illegible], [illegible] von
den [illegible] für 31,697 M. der

Regierung angeboten, die sehr
begierig ist, sie [illegible] Bot. Garten-
verein in Berlin zu kaufen, wenn
auch der Cultusminister das Geld
nicht bewilligt hat. Auch die Biblio-
thek, die auf 5000 Thlr geschätzt
ist, wollte die Regierung ankaufen.
Im April 1878 wird die Sache
wieder jetzt entschieden werden.
— Ich habe über 62 Tage wöchentliche
Exkursionen in den Umgebungen, die ich
nur mit einem Regenmantel [illegible]
Pferd, welches mein eigenes Geschäft
gebraucht hatte, verschaffen u. 2 Leuten
[illegible] in Lappland oder am Lande
machen. Morgens u. Abends wird ge-
gessen. Ich habe wenigstens 4–5 Tage
mit [illegible], beide 7 mit [illegible],
4–5 mit Lobelia Dortmanna,
u. einige mit dem [illegible]
Fontinalis microphylla [illegible]
Schimper gefunden. Das Wetter
war durchaus prächtig — Nun
leben Sie wohl! Möge es Ihnen
besser gehen, wie mir. Herzlichste
Grüße an Ihre werthe Frau u.
Kinder. Hochachtungsvoll verbleibe Ihr
S. O. Lindberg

Rec. Sept. 24
Ans. Oct. 3

Königsberg in Prussia
Sept. 1, 1877

Dear Friend !

Again I have the most sad reason to write to you, as I have been smitten by the most painful loss, which I could suffer. My dear wife died August 29 at 2 o.c. in the afternoon of a pleuresy on the right side after not quite 11 days of sickness. I wrote you, that she had to suffer in March and April through a fracture neglected by the fa-lily doctor (verbatim in German: " house-doctor", E.D.). The matter became so bad, that I turned to the surgeon of our university, Prof. Schönborn, who examined the affliction with great conscientiousness and diligence, but who could not create the desired truss with the inadequate mechanical means, which are available here. I had to send my wife to a Dr. Langgurrit in Berlin, who found the case also very difficult, and who after many trials was able to fashion a somewhat suitable truss. These tortures fell into March, April and M ay of this year. On March 29 Braun died, which touched her very much. Then she spent the Summer vacation 4 weeks in Oliva near Danzig at the ocean in a marvelous area. Unfortunately, I could not be there, and recovered well, specially, because Cecilie was with her, she returned on July 29. On August 4 I went to the Karteuser District for bota - nical excursions, which I used to undertake every year. That is my recreation. The area is one of the worst of the district . Sand and .....(the German word is Karschuben; not in dictionery. E.D.) During the night 19/20 August Marie took sick with a rheumatic fever, the base of the suffering started from the muscles of the right side of the breast. I only heard about it on August 24, and in the evening of the 25th I was home. I found the situation of my wife very disturbing. Since getting sick, she had eaten almost nothing, she had a severe diarrhea, caused, as she was convinced, by too much drinking of Seltzer-water. She had been cupped (blood-letting, E.D.) after which

0 1 2 3 4 5 6 7 8 9 10
cm
copyright reserved
Missouri Botanical Garden

she could breath easier, but a painful, strong coughing developed. The family doctor, Dr. Wm. Schieffen declared, after this, that the pleura were somewhat thick, but that the lungs had not been attacked. To my great joy Cecilie Mettenius arrived unsolicited during the evening of August 26. August 29 early the fever was higher, I saw her 3 times during the forenoon, the last time at 1¼ hour, she took then a little milk with tea, said, that she enjoyed this, and complained " I am so benumbed, I do not know at all who I am ". At 2 o.c. the nurse suddenly called my sister in law to the room. Cecilie called me immediately. Mary was in her last gasps. She had sunk back into the pillows, the difficult breathing long drawn out, the eyes still open, the pupils hazy and turned backwards.. After a few moments the pulse ceased. An hour later came the doctor, who could only verify the death. We buried her 3 minutes from my home on the nearest graveyard in the afternoon of August 31 at 5 o.c. in the afternoon. As her grave, the future is entirely dark in front of my eyes. In Berlin, mother Braun has again an abscess on the breast. That this will cause her end, is certain. When ? That is the question. Probably very soon. Cecilie is much needed there. She hopes to stay free one month, but then home ! What shall I do with my children of 16 and 8 years age ?

As to your Isoetes I sent your letter right away to Cecilie. The case has not been decided, because Cecilie is away, I wrote to Dr. Wagnus, that he will look for the Isoetes sent by you, which have not been published - and, also, the drawings - they will be ..... and the latter sent to me for you. I shall send them then to you.

Nymphaea flava I have here; it increases strongly, but does not flower. From the roots emerge runners. I do not know how to work with them. Nypmphaea tuberosa does it similarly . I had it in the open, where it prospers well but flowers poorly. N. flava I cannot of course keep here in the open.

0 1 2 3 4 5 6 7 8 9 10 cm copyright reserved Missouri Botanical Garden

Your (see note at end of letter) I did receive some time back, and thank you most kindly for them. The amber matter I have not taken in hand since then, but hope, to get to it soon. Of the ~~woods~~ timber I do not need large pieces, only that large, that the piece should come from an older trunk if possible -. Thin branches I do not reject in an emergency - if a few yearly rings in good development show, and there is a chance for a good crosscut of $\frac{1}{4}$ " square, and for diagonal and tangential cuts. If larger pieces can be obtained, I would like them better. Ceciliie searched in the inheritance for the pieces of wood sent by you, but did not find anything specific of that kind. - I found though in an american publication - where, I can not tell unfortunately - a listing of 400 wood types of North America, which were present at the general exhibition in New York. Is'nt it possible, to get something from there ?

I wrote 2 biographies of Braun, one for the Flora of Regensburg, and one for Tasman Journal of Botany; both may be in print. Braun's herbarium, collections and hand-written reports -the latter strangly rich and exemplary, as hardly any other person left something like this behind - have been offered by his (family, E.D.) to the government for M 31,697.- , which is very anxious, to buy them for the royal Garden Museum in Berlin, if only the minister of finance puts the money in the budget. The government wants to buy also the library, which is estimated to contain 5,000 pieces. Before April 1878 the matter can in no way be decided.

see note 2 E.D.

I just examined 62 lakes. I travelled into the deserts, where I was with my wagon (the German is "Rungenwagen" a contraption unknown to me. E.D.) and horse, which carried my own boat, specially built for this, and 2 men, just as in Lappland or in previous

. Morning and evening we eat. I found again 4 - 5 lakes with Isoetes, 6 or 7 with Littorella, 4 - 5 with Lobelia Dortmanni

and several with the new microphylla, which Mr. found. The weather was horrible this time. Now, stay well! May you fare better than I, heartiest greetings to your fine wife and Georg. With hearty admiration, Your

R. Caspary

Note 1) by translator E.D.: The German word reads like "Arieuthobien" or something near that.

(translated from German script by Edgar Denison, August 1988)

Note 2) East Prussia is covered by large lakes - The Massurian Lakes, which trapped an entire Russian army in 1914 at the beginning of world-war I.

0 1 2 3 4 5 6 7 8 9 10
cm
copyright reserved
MISSOURI BOTANICAL GARDEN

Rec Oct 12th
Ans Xbr 11 1880

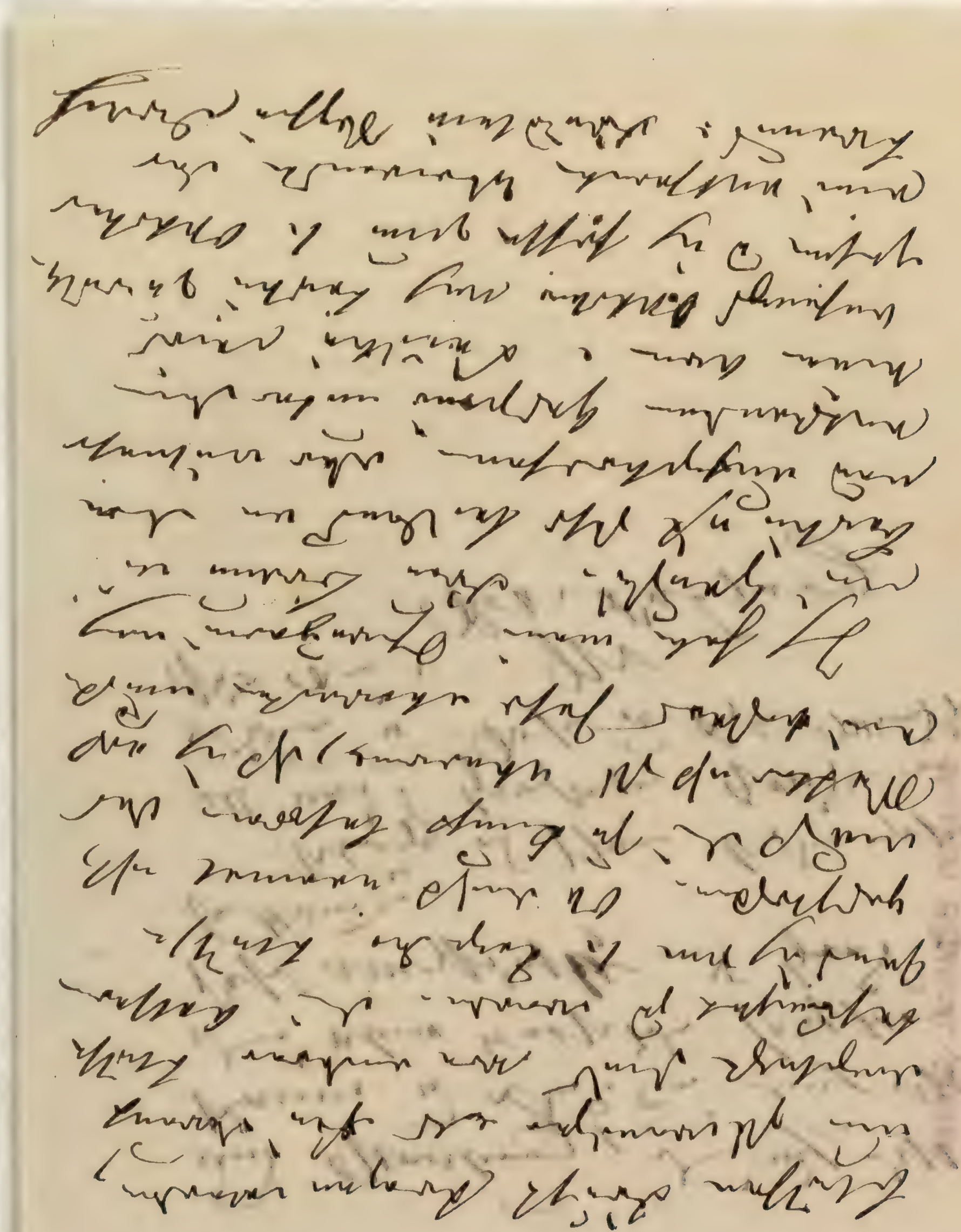
[illegible] u. [illegible]
22. IX. 1877

Werthester Freund!

Dr. Magnus in Berlin hat
mir Ihre Zeichnungen und Hand-
schriften über die Isoëtes,
die Sie an A. Braun schickten
zugesendet. [illegible] hat Magnus
[illegible] [illegible] [illegible]
[illegible] [illegible] [illegible]
Dr. [illegible] [illegible] ist nur
[illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible]

Hochverehrter Herr.

Seit meinem letzten Briefe
hat Nymphaea flava schon
3 Blüthen geöffnet. Die letzte
den 2 Tage. Ich habe die Blüthen
genau untersucht, die Pflanze
gehört trotz der auffallenden gelben
Abtheilung Castalia, nicht
zu Lotus, wie ich ursprünglich
vermuthete, bevor ich die Blüthe
kannte. Leider ist es schon
spät im Jahre, das Wetter
ist nicht so [illegible], um
[illegible] Zeichnung [illegible], die Blumen
[illegible] und [illegible] richtig
[illegible] ist und daß
[illegible] nicht zu erwarten, daß die



0 1 2 3 4 5 6 7 8 9 10
cm
copyright reserved
MISSOURI BOTANICAL GARDEN

MISSOURI BOTANICAL GARDEN
GEORGE ENGELMANN PAPERS

0 1 2 3 4 5 6 7 8 9 10 cm
copyright reserved
MISSOURI BOTANICAL GARDEN

Rec. Oct. 12
Ans. Nov.26,1880

Königsberg in Prussia, Sept.22,1877

Esteemed Friend !

Dr. Magirus in Berlin sent to me your drawings and written statements about Isoetes, which you had sent to A. Braun. More could not be found. I mail today a small packet to Dr. Felix Flugel, who will get it to you through the Smithonian. I send it registered, to be sure, that he carries the task out...

Since my last letter Nymphaea flave has had 3 blossoms. She flowers in day time. I examined the flowers in detail, and the plant belongs despite the runners into the division Castalia, not to Lotus as I assumed then before I knew the flower. Unfortunately it is late in the year and the weather is cold and rainy, and the sun shines only sometimes this time of the year, daily or not at all, and it cannot be expected this year that the flowers will produce fruit, the less so, as they are inclined to be fertilized by other flowers. I found the anthers dead on the 1st day of flowering. If this be normal, the future will teach; the weather is too abnormal, that I will have to wait 'til next year.

I have a sister-in-law in the house. Mrs. Braun in Berlin is badly ailing from a newly broken-out, or, rather developed abscess under one arm. ,,,,,,,,,, will return to Berlin beginning October, and I hope to get by October 1 a distant relation of the Brauns, Miss Sophie Drach from Offenburg, whom I do not know, but whom Mathilde recommends much, into my house.

May you be better off than I. Heartiest greetings to wife and son and best wishes for you

Ron Caspary

(translated from German script by Edgar Denison, July 1988))

0 1 2 3 4 5 6 7 8 9 10
cm
copyright reserved
Missouri Botanical Garden

Rec. April 7
ans. P.C. Apl 10

Königsberg in Pr.
Botanischer Garten
18.3.1880

Werthester Freund!

Ich danke Ihnen herzlich für Ihren Brief vom 11.2.80. Es thut mir sehr leid daß Sie unwohl [illegible] und Schmerzen erlitten haben. Unglücklicher Weise erfuhr ich früher [illegible] durch Dr. [illegible], auch daß Ihr [illegible] durch [illegible] sehr [illegible] gewesen sei. Ich hoffe nun, daß Sie [illegible] jetzt über [illegible] guten Nachrichten geben können. Für Ihre Quercus u. Coniferen von Californien u. die Catalpa besten Dank. [illegible] habe ich noch nicht erhalten. Auch erhielt ich Samen von Catalpa speciosa. [illegible] wird in unserem Klima nicht gedeihen, da [illegible] die Californischen Coniferen sich nur sehr [illegible]. Ich brauche sie [illegible] für die Coniferen des Gartens. Von Dr. [illegible] sind einige wenige Coniferen (Thuja gigantea u. and.), die kaum noch für Sie zusammengelegt hatte, mir für Sie übergeben. Es ist sehr [illegible], daß sie kaum durch die [illegible] zu spät [illegible]. Einige kleinere [illegible] u. Picea excelsa [illegible] Spiraea [illegible] [illegible], [illegible] und [illegible] auf der [illegible], Loranthus [illegible] habe ich [illegible] an [illegible] [illegible], [illegible] [illegible].

Ich befinde mich seit dem 12. Febr. in der schwierigen Lage des Umzugs in das neue Ausstellungsgebäude im botan. Garten. Es ist 2 stöckig mit 12 Fenstern.

Breite u. sieht sehr stattlich aus. Die 30 Jahre
u. mehr einst als so [illegible] Räume früher
die Sammlungen, die im oberen Stock aufgestellt
sind) Unten [illegible] – Unten sind 2 Auditorien
u. meine Wohnung von 10 Zimmern, Küche, Speise-
kammer; das Laboratorium ist sehr geräumig
mir aber leider nicht hoch genug angelegt,
ich fürchte der Boden in meiner Wohnung wird
sehr kalt sein, was ich besonders fürchte
zumal mir sehr unglücklich ist, da ich im Leben
meist sehr rheumatisch in Hüften u. Beinen
geworden war, woran ich jetzt allmählich ge-
nesen bin. Kommen Sie doch so weit her
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible], 19 Jahre [illegible] alt,
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible] 1/4 Jahr [illegible]
[illegible]
[illegible]

MISSOURI BOTANICAL GARDEN
GEORGE ENGELMANN PAPERS

0 1 2 3 4 5 6 7 8 9 10
cm
copyright reserved
MISSOURI BOTANICAL GARDEN

auch, aber die [illegible] sind sehr langsam [illegible]-
Georg, 16 Jahr alt, ist auch Untersekunda, recht
fleißig, gutartig u. gut geartet. Was er wer-
den will, weiß er leider auch nicht. Die größte
Neigung für Mineralogie, die er [illegible] hatte, ist
leider durch die Schularbeiten unterdrückt worden.
Marie, 10 Jahr alt, ist ein [illegible] sehr liebens-
würdiges Kind, der Mutter ähnlich, wenn auch nicht
so begabt, der Liebling aller die es kennen ler-
nen. Beide sind die [illegible] [illegible] u. [illegible]
[illegible] [illegible], bei Marie sehr
[illegible] u. [illegible] und oft [illegible]. Ich
[illegible]: ich glaube bald, daß [illegible] die
[illegible] u. [illegible] [illegible].—
Winter 78/79 habe ich die Pflanzen-Krankheiten unter-
sucht [illegible] [illegible] [illegible] [illegible] [illegible]
[illegible], [illegible] [illegible] allgemein sehr selten sind
u. kaum 1/10 [illegible] von den [illegible] [illegible]
durch [illegible] u. Untersuchung an jeder Stelle [illegible]
[illegible]. Die [illegible] gegen [illegible] [illegible]
dem [illegible] [illegible] habe ich zur Beobachtung [illegible]-
[illegible]. Leider ist [illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible], [illegible] [illegible] [illegible]
[illegible] Arbeit über [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible] nicht [illegible]
[illegible] u. [illegible] auch [illegible] [illegible] [illegible].
[illegible] [illegible] [illegible] [illegible] ohne [illegible] in die
[illegible] [illegible]. Das Material [illegible] diese Arbeit
[illegible] [illegible] [illegible] die [illegible] der [illegible]
[illegible] in Danzig, der [illegible] [illegible] [illegible], [illegible] aus
dessen [illegible] [illegible] [illegible], weiß ich nicht, aber
[illegible] [illegible] [illegible] [illegible] [illegible] nicht [illegible]
[illegible], die [illegible] [illegible] ~~[illegible]~~ die [illegible] [illegible]
[illegible] u. [illegible] u. [illegible], die [illegible] [illegible]
[illegible] gegen [illegible] [illegible] [illegible]
[illegible] [illegible] sind u. [illegible] [illegible] [illegible] [illegible]

MISSOURI BOTANICAL GARDEN
copyright reserved
cm 0 1 2 3 4 5 6 7 8 9 10

not complete!

Rec. April 7
Ans. " 10

Königsberg in Prussia
Royal Botanical Garden
March 18, 1880

Esteemed Friend !

I thank you ver much for your letter of Feb. 11,'80. I am very sorry, that you had to go through so much difficulties lately. I heard about the loss of your wife at the time through Mrs. Mettenius, and, also, that Georg was severely sick with cadaver poisoning. I am glad, that you can at least give good news about yourself. For the Quercus and conifers from California and the Catalpa best thanks. More I have not yet received. I further received seeds of Catalpa speciosa. Will probably not prosper in our climate. The dissertation about the California conifers is most welcome. I need is for the conifers of Bronsteins (? E.D.) From Mrs. Mettenius I was given for you a few conifers (Thuya gigantea and others), which Braun had put together for you. There is so little, that it is hardly worth - while to go through the Smithonian for shipment. Less known essays,

---

pieces with leaf-sprouts on the roots, Isoetes echinospora, I just mailed to you by post.

I am in the very disagreable situation since Feb. 12 in mo - ving into the new institution building in the Urban Garden. There are two floors with 12 windows

(between bottom of page 1 and top of page 2 there is something missing. E.D.))

.... width and looks quite imposing. It will offer for 50 years or more a longish hall for the collections, which present our work. Below are two auditoria and my residence of 10 rooms, kitchen, pantry; the basement is very spacious but not deep enough, and I fear, the floor in my home will be very cold, which I fear specially, and which is very disagreable to me, as I had become quite rheumatic in Bonn in my feet and legs, of which I recovered slowly. If you come ever again to Europe, take quarters with me,

0 1 2 3 4 5 6 7 8 9 10
cm
copyright reserved
Missouri Botanical Garden

the longer the better. I have a home manager, a Miss Drach, sister if the engineer Drach in Karlsruhe, the husband of Mathilde Zimmer's daughter, who is traffic director in Karlsruhe, who does the house - keeping and looks after the children. Unfortunately, much is not as desired. A wife cannot be substituted by anything, especially, when she was so outstanding as mine. Our family life is impoverished and our spiritual verve. Mathilde, 19 years old, is the oldest daughter, is still too withdrawn, shy, not made for the impact of business nad household, but rather for language studies, she is not yet capable, to direct the household and all that goes with it, to handle by her- ~~but rather language studies~~. self. Diphtheria, which she had when 2 years old, robbed her unfortunately of the of the vigour in contact with the outer world; her legs were lame for almost ¼ year. Mathilda strives much to compensate for the im- ped ~~pde~~diments, which burden her and is specially attentive to me, but progress is very slow. Hans is in Untersecunda (the 3rd year be- fore ending the gymnasium studies, E.D.), quite fit, practical and of a good nature. Unfortunately, he does not know, what he wants to be- come. His great inclination toward mineralogy has been suppressed unfortunately through school work. Marie, 10 years old, is a heal- thy, very kind child, resembling her mother, though not as gifted, the darling of all who get to meet her. Unfortunately, the glands of the throat and the mucous membrances are highly sensitive, just as with my late wife, and cause in me apprehension. I wished, that it would be soon possible for Mathilda to take over the household.-

In the Winter of 78/79 I advanced the plants of the ..... desert a good deal - there are rather many in private collections here, though they are generally very rare and hardly 1/10 % of the endemic ones. Gruggert's originals, belonging now to the State, I have in hands for treatment.

0 1 2 3 4 5 6 7 8 9 10 cm
copyright reserved
Missouri Botanical Garden

Unfortunately Göggert is a serious impediment in the description of the problem because he does not publish a comprehensive dissertation about....., which He has in hands since December now and probably will never publish it. He put many nambers into the world without a description. The material for this work is based primarly in the collection of the teacher Menge, in Danzig, who now is dead; What will become of this collection I do not know, but, without doubt, it will not ever become available to me, because since the separation of the Province Prussia into East- and West-Prussia, the people of Danzig have turned quite fanatically against East Prussia and specifically Königsberg, though they do not possess the strengts and ways, except money, to put themselves in a scientific way on their own feet, with the only result, that their works remain lying on the side and can not be used, because they are not able to come up with certainties. I organized 19 years ago a florishing botanical society in the Province Prussia. Four members from Danzig resigned 2 years back and founded a west-prussian Northern-zoological Society, which can not accomplish anything, but which exists thanks to the money authorized by the west-prussian diet, and acts in a blown-up manner. Bail in Danzig, professor on a real-school (non-classical, secondary school, E.D.) is the group leader

causes me to lose much time. It is well known, that one knew only very imprecise facts about plant distribution even in Germany, also in Prussia, and the prussian species society, now 324 members strong, is forced to explore district by district through emissaries. 2 districts have been examined carefully. I made the seed - examinations. Now I want to publish the results. That takes very much time. 2 assistants worked recebtly together 7 hours on the

0 1 2 3 4 5 6 7 8 9 10 cm copyright reserved Missouri Botanical Garden

organization of the material prepared and collected by me, and the final editing will take also a lot of time. - For Nymphaea studies I had lately little time, however the variation of the disk (the top of stigmas) (? E.D.) with Nuphar were worked up. This is most remarkable. Nymphaceae have been worked on; in it for the 1st time appears a correct diagnosis of Nymphaeae alba and candida and their kinds of species. Now shall the Nymphaceae be attacked again seriously as I get now space. In the cramped home I could not do anything right due to lack of space. Soon more. Greetings to Georg, in greatest friendship Your

R. Caspary

(translated from German script by Edgar Denison, August 1988)

0 1 2 3 4 5 6 7 8 9 10
cm
copyright reserved
MISSOURI BOTANICAL GARDEN